



BOROUGH OF PRESTON.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

URBAN AND PORT SANITARY AUTHORITIES,

FOR THE

Year ending December 31st, 1907.

H. O. PILKINGTON,

MEDICAL OFFICER OF HEALTH,

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Report of the Medical Officer of Health.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

Gentlemen,

With the termination of each year it becomes my duty to submit a Report dealing with the sanitary history of the town during that period, and criticising and explaining a number of vital statistics collated and arranged under certain specified headings and tables.

With regard to the rate of mortality, the past year of 1907 may take its place amongst the best on record, the rate being slightly lower than that for the year preceding, and indeed with two exceptions (1903 and 1905) being below the rate for any of the long line of years for which reliable statistics are available,

Much of this diminution in the amount of mortality must be attributed to the fact that the summer was an unusually cold and wet one, and that as a consequence the epidemic of Infantile Diarrhœa, though fairly severe in character, was much below the average in duration. On the other hand the cold and severe weather which marked the opening months of the year, and the fall in temperature, accompanied with biting winds, which occurred after Easter, naturally had the effect of increasing the mortality from Bronchitis and Pneumonia, and proved especially fatal amongst persons of advanced age.

The usual outbreak of Influenza, though not so widely spread as in many recent years, was present during the months of Spring and early Summer; and though no great number of deaths was directly attributed to this cause, it led up to, or accompanied many cases of Bronchitis or Pneumonia, of which a certain proportion terminated fatally.

Following the plan carried out for many years in my Annual Reports, I deal with each disease in the order in which it appears on the Mortality Tables.

There were no deaths from Small Pox, nor was any case of sickness notified, or otherwise brought under observation, during the past year. Freedom from this form of infection was general throughout the kingdom, but the fact that isolated cases did from time to time

occur in various localities, shows the constant liability to chance introduction. whilst its further spread is governed by the efficiency of the preventive measures available, the promptness with which they are used, and the amount of material—i.e. the number of unvaccinated or imperfectly vaccinated persons—susceptible to an attack. It is to be feared that here, and in certain other towns and districts to a much greater degree—this last named factor in the creation of an epidemic is constantly increasing, due to the greater facilities now offered for the neglect of vaccination.

The extent of this danger will not be properly known until the outbreak of an epidemic, followed by the usual urgent and immediate demands for that protection which is now so frequently disregarded and despised.

The Ducker Hospital, for the reception and treatment of Small Pox patients, originally erected in Moor Park in 1888, and afterwards re-erected on its present site in Holme Slack, still remains in a fairly serviceable condition. It has again been severely tried by the storms of the past winter, and since it was only intended in the first instance to serve the purpose of a temporary building, the time is fast approaching when it will have to give place to a permanent structure, and one, which however plain and unassuming in appearance, will still be in accordance with modern views and the sanitary requirements of the day.

The deaths from Typhoid Fever number 17, of which 13 occurred in adults between the ages of 25 and 60 years.

The Mortality from this disease is lower than that for the preceding year, and allowing for increase of population, compares favourably with the average for many years past. In all probability the climatic conditions which favourably affected the Diarrhœal mortality had an equally beneficent effect upon the amount of sickness and the consequent mortality from Typhoid Fever. Of the 17 deaths registered from this cause occurred in the Isolation Hospital, and will be dealt with later on in connection with that Institution, but in the Tables of mortality they are put down to the several districts from which the patients were removed. The number of cases reported amounted to 113, to which the deaths stood in the relation of 15·04 per cent., whilst the mortality rate per thousand of the population was 0·15, a rate which was exceeded in Middlesbrough, Rhondda, Grimsby and Wigan.

From Scarlet Fever only 7 deaths were recorded, a number even below that for each of the past three years, and very much lower than the average if a more extended period be taken. In recent Reports the decreasing severity in the type of disease now met has been alluded to, and the experience of the past year shows that this improvement has continued.

The disease was somewhat prevalent towards the close of the year, and, as was then pointed out, the very mildness of the attack may in itself constitute a source of danger, since it is apt to lead to a disregard of precautions, and so not only favour the spread of infection, but also endanger the life of the patient through careless exposure to cold, especially during the critical period of desquamation.

The notified cases of sickness from Scarlet Fever amounted to 247, so that the case mortality did not exceed 2·83 per cent., whilst the rate per thousand—0·06—was exceeded in Salford, Sheffield, Wolverhampton, and to a less degree, in many other of the large towns.

The deaths from Measles amounted to 22, of which the majority occurred in St. Peter's, Moor Brook, and St. John's Wards.

The disease was prevalent towards the close of 1906, but an improvement commenced with the beginning of the past year, partly due no doubt to the Posters, referred to in my last Report, warning and advising people with regard to this disease, partly also to this fact that Measles, though seldom entirely absent, runs in periods of prevalence and remission, and that the year 1907 comes under the latter category.

The rate of mortality did not exceed 0·21 per thousand, as against an average rate of 0·43 for the whole of the large towns, though several of these, notably Middlesbrough, Birkenhead, Bolton, St. Helens and West Bromwich suffered much more severely.

The mortality from Whooping Cough was heavy, a total of 63 deaths having resulted from this disease.

With one exception, all these deaths occurred in children under the age of 5 years; and, as regards locality, although the disease was general throughout the town, St. Peter's and Park Wards furnished a large proportion of the deaths. The rate of mortality amounted to 0·60 per thousand, and, with the exception of Salford, this was the highest recorded amongst the large towns.

From Diphtheria the deaths amounted to 14, a number below the average of former years, and one which compares very favourably with that of the great majority of the other large towns. Indeed with the exception of Leicester, Northampton and Huddersfield the mortality rate—0·10 per thousand—was the lowest returned from any of the large towns or cities. The majority of the cases occurred in the older and more central parts of the town, Trinity and Park Wards together contributing 8 out of the total 14 deaths. The case mortality stood in the proportion of rather less than one in four, the number of cases reported having been 61, of which the Deaths—14 in number—formed 22·95 per cent.

Diarrhœa occasioned 57 deaths, a number which compares very favourably with that—219—recorded from the same cause during the preceding year of 1906.

As already stated, the period of Infantile Diarrhœa, in epidemic form, was of unusually short duration, the summer months—July, August and September—passing without any very marked increase in the mortality from this cause. The influence exerted by the temperature upon Diarrhœal sickness and mortality is well shown by a comparison between the number of deaths recorded in the four weeks ending September 14th of this and the previous year. During this period in 1906 the ground temperature, at a depth of four feet from the surface, exceeded 56 degrees, and 81 deaths resulted from Diarrhœa, whilst last year the four foot temperature barely reached 54 degrees and the Diarrhœal deaths were only 3 in number.

It was not until the close of September, and the first fortnight of October, when the flies, influenced by the approaching cold, began to gather in the houses, that there was any great loss of infantile life from this cause, but although the epidemic was then fairly severe for a few weeks, it soon ran its course, and as a consequence, as regards Infantile Summer Diarrhœa, the past year was an unusually fortunate one.

Although the part played by the common house fly in the causation and conveyance of such diseases as Diarrhœa has long been suspected, and indeed recognized, in this country, it has of late years attracted, and received, much more attention from scientists, bacteriologists and sanitarians.

Since the house fly breeds in rubbish, stable manure, and decaying matters generally, it is obviously desirable that no collections of this kind should be allowed to remain in the immediate neighbourhood of a dwelling house, and it is the duty of each householder to clear his premises from such undesirable accumulations.

Until the services of the horse are entirely superseded by the motor engine ; stables in a town cannot be altogether avoided, but certain restrictions are necessary with regard to the midden in which, for a time, the stable manure must be stored.

Where possible, it is better that such manure should be removed each day, but in the majority of cases circumstances render such prompt removal difficult if not impossible. The midden should then be reduced to the smallest possible dimensions, it should not be sunk below the level of the ground, should be lined, as to the sides and bottom, with smooth impermeable cement, should be efficiently drained, and covered over. To a great extent

these measures would prevent the nuisances so often complained of in connection with these stable middens in towns—the percolation of liquid under, and through, walls into adjoining premises, the smells arising from the storage, and removal of the manure, and the swarms of flies, which having been bred in such middens are driven by the colder weather of autumn into the neighbouring houses. The advance of sanitation demands improvements, and greater care, in matters of this description, and the owners and tenants of such stables and manure pits must be prepared to conform to what may fairly be required for the preservation of the public health. Of the 57 deaths caused by Diarrhœa, 47 were those of infants under the age of twelve months, 6 occurred in children between the ages of 1 and 5 years, and the remaining 4 were those of adults or elderly persons.

With a view to assist in the prevention of Infantile Summer Diarrhœa, I had the following notice printed on a card measuring about 6 by 4½ inches. The District Registrars kindly assisted me by giving one of these to each person registering a birth, whilst the Health Visitors also distributed them when visiting houses in which there were infants or young children :—

PREVENTION OF SUMMER DIARRHŒA IN CHILDREN.

The Mother's breast milk is the natural, and therefore the best food for the infant.

Where the child cannot be suckled it should be fed upon good cow's milk, treated in the following manner :—The milk should be boiled, placed in a clean vessel which has been thoroughly scalded out, and then covered with a plate or saucer which has also been scalded. This covering should be at once replaced after any milk has been taken out for use.

The vessel containing the milk should be placed in a pan of cold water and kept in the coolest part of the house.

The feeding bottles should be kept perfectly clean, and should be scalded out with soda and water, and afterwards with water alone. On no account should a tube feeding bottle be used.

Should Diarrhœa occur, no time should be lost in sending for a Doctor, and in the meantime nothing should be given but water that has been boiled.

June, 1907.

H. O. PILKINGTON,
Medical Officer of Health.

The deaths from Consumption, Phthisis or Pulmonary Tuberculosis amounted to 128, a number very much in accord with the average of previous years.

With regard to this disease, which so regularly contributes to the death rate of all large towns, much attention has of late been given; and arguments have been advanced, both for and against, its inclusion in the list of those diseases for which compulsory notification is required.

Sanatoria have also been founded in which the disease can not only be treated, but in which the patients may be trained and instructed as to certain rules, which offer to them the best means of recovery, and at the same time diminish the chances of infection being conveyed to any one with whom they may be in contact. But these institutions are too few in number, or rather the disease is too widely spread, to allow a hope that, without greatly increased expenditure, much good will result, and it is I think by general sanitation, and by the slow but gradual education of the people as to the nature of the disease, and its methods of propagation, that the greatest and most permanent benefit will be obtained. By general sanitation I mean improvements not only in the homes, workshops, and surroundings of the people, but also in their general habits and mode of living; whilst education will at least teach them that since the germs of Consumption are propagated by the sputum, the practice of spitting in public places must be not only a filthy but a dangerous one. For the same reason, unless the sputum is carefully dealt with, a single consumptive patient becomes a source of undoubted danger to every other occupant of the house, but more especially to those who—as not unfrequently happens in a large working class family—have to share with him the same sleeping apartment.

These are matters which are becoming more generally known amongst the more intelligent of the community, and as they become better known and appreciated so the dangers of Consumption will diminish.

The deaths from Respiratory disease, apart from Consumption, classified under the headings Bronchitis and Pneumonia amounted respectively to 291, and 163, and exceeded the average from the same causes in previous years. This was mainly due to the cold and treacherous weather experienced during the early part of the year, when these diseases were prevalent and proved especially fatal amongst infants and elderly people, the two extremes of life being especially susceptible to severe or rapid changes of temperature.

From Premature Births, and the diseases peculiar to the first few years of child life, the deaths numbered 358, which is about equal to the average of the past 3 years, but shows an improvement upon that for six, ten, or a more lengthy period.

Of these deaths 286 occurred in infants under the age of twelve months, and if to these there be added the fatal cases of Diarrhœa, Bronchitis, Whooping Cough, &c., recorded during the same age period, a total of 495 deaths will be found to have been registered in children who had not yet attained the age of one year.

The exact locality of these Infantile deaths is shown upon one of the appended Plans, whilst Table No. 5A gives minute information as to the nature of the cause of each death, and the age period at which it occurred, the year being divided for this purpose into months, whilst the first month is again subdivided into four weeks. From this it will be seen that a great number of these children died within a very short interval after birth, 93 being registered as less than one week old, of which number 62 are reported to have been prematurely born. Others again succumbed, after an equally short life, from Congenital Defects, Atrophy, Debility, &c., showing that their grasp upon life was of the feeblest description.

The Infantile death rate, measured in the usual way, that is by the proportion of deaths under one year to the registered births, amounted to 158 per thousand, and though this figure is still much too high, it gives satisfactory evidence of improvement effected during the past few years.

Throughout the whole country the rate of Infantile Mortality was below the average of previous years, due in a great measure no doubt to the comparative absence of Summer diarrhœa.

Of late years public attention has been strongly attracted to this question of Infantile Mortality, and it has not only been dealt with by Medical Officers in speeches, reports and papers at Sanitary Congresses, but it has formed the subject of special, and widely attended, Conferences in London. Although the causes are well known and recognized by those who have to deal with the subject, exact information, and more reliable statistics, on certain important points—as for instance the effect of maternal employment before and after the birth of the child—have hitherto been wanting. An attempt to supply this deficiency has resulted in a Conference convened in November last by the Home Secretary, and attended in London by Medical Officers of Health from all parts of the kingdom.

It was arranged that in certain towns and districts, where the conditions were suitable, and the Sanitary Staff sufficiently large, a selection should be made of certain blocks or areas, in which a fairly uniform condition existed as regards the size of the houses, the social surroundings of the inhabitants, and the nature of the employment in which their lives were passed.

An enquiry was then to be carried out with regard to all births occurring within the limits of these selected districts during the present year of 1908, a form of questions having been drawn up by a Committee appointed for the purpose. These questions deal especially with the history of the parents and their employment, more particularly with that of the mother, notes being taken of the length of time intervening between her leaving work and the birth of the child, and again between the confinement and her return to her occupation in factory or workshop. Altogether the enquiry is a fairly exhaustive one, and since it deals with matters about which people are, not unnaturally, inclined to be somewhat reticent, it will, in order to prove successful, have to be carried out with a good deal of discretion and tact.

After the information in question has been obtained, the child will continue to be visited from time to time during the twelve months succeeding its birth, or, should it fail to live so long, up to the time of its death. Especial notice will be taken of the manner in which it is fed and nursed, so that a record will be obtained of influences affecting it before—and at the time of—its birth, as well as, should it survive so long, during the first year of its existence. Since the enquiry deals with children born up to the end of the present year, it cannot close, or be completed, before the last day of 1909, after which very considerable time must be occupied in compiling and arranging the large amount of information which will, it is to be hoped, by that time have been obtained. In addition to the benefits which in the future will result from this information, the children in question, and their mothers, will, both at the time of birth, and for the following twelve months, have the advantage of the advice and assistance given to them by the Health Visitors to whom I have entrusted this responsible duty.

Such an enquiry is closely linked, and indeed works hand in hand, with the Early Notification of Births' Act, adopted by this Authority from the commencement of the present year. The provisions of this Act require, amongst other things, that a report of each birth shall be forwarded to me within thirty-six hours of its occurrence; whereas, under former conditions, a period of at least six weeks, and frequently one much longer, might intervene before this information became available.

The existing arrangement enables the Health Visitor to call shortly after the birth of a child, and so to give—if the mother be young and inexperienced—advice and assistance at a time when it is most valuable, because most required.

Neither the Early Notification of Births' Act, nor the Special Enquiry in certain districts came into operation until the beginning of the current year, but since they were formulated and arranged in 1907, I have included a reference to them in my Report for that year.

They are measures which distinctly aim at improving the health and general condition of very young children, and as such must, and will, have a favourable influence upon the Infantile Mortality.

Another and most important measure, also coming into operation at the beginning of the present year, and having for its object the improvement of the health and physique of older children—those of school-going age—is the Medical Inspection of School Children. This is wide-reaching and capable of almost indefinite extension, but in its simplest form it provides for the medical examination of every child at the time when it first enters upon school life, again in the third and sixth years of its school career, and, lastly, when it leaves school for the purpose of commencing work.

The first inspection is the most important, and will therefore require to be the most carefully made, because any defect or lesion in the child's framework, internal organs, or special senses, can, if early detected, be more hopefully treated, and the formation of habits may be prevented, which, if left unchecked, would have the effect of increasing, and possibly of rendering incurable, the existing evil. A record will be made of the child's height, weight, and physical characteristics, and this will accompany it as it goes from class to class, of from school to school, and so will form a concise history of its health and bodily development during the school-going period. The attention of parents will be called to any condition requiring medical treatment, and they will be expected to obtain the necessary assistance, but where appearances point to poverty, neglect, want of cleanliness, either of the child or its home, or general ignorance, the services of the Health Visitors may in these directions, be very usefully employed.

All these measures for the improvement of infantile and child life would seem to tend to relieve parents from cares and responsibilities which are undoubtedly theirs, but the prosperity, and very life, of a country depend upon the generation now growing up, and so the matter becomes one of national importance. At the same time it is the duty of those who bring a child into the world to provide for and to protect it, and so it is to be hoped that while the State, in its efforts for the amelioration of child life, assists those who are unavoidably unable to help themselves, it will see that the lazy, drunken, and thriftless do not lightly throw off responsibilities which they are ever ready to cast upon other shoulders.

The carrying out in an efficient manner, of the measures just described will necessarily involve a very considerable outlay of time and labour, and one which it would be impossible for your Medical Officer, with his present staff to afford.

Your Committee have therefore, by a resolution passed on March 17th, and confirmed by the Council on March 26th, granted me the services of two additional Health Visitors, an arrangement which enables me to divide the town into four, instead, as was formerly the case, two working districts. District A—Miss Hogarth—includes St. Peter's, Maudland, and Moorbrook Wards; District B—Miss Topham—Deepdale, Ribbleton, and Fishwick Wards; District C—Miss Bennett—Trinity and Park Wards; and District D—Miss Rocke—St. John's, Avenham, Christ Church, and Ashton Wards.

Districts A and B respectively contain the two special areas selected for the Infantile Enquiry, and are therefore retained by the two Visitors who have been for some time in the service of the Corporation, and who began this special work from the commencement of the year. District C is small in area; but, situated in the centre of the town, contains much old property, and many of the poorest class of inhabitants. District D is of large extent, but contains most of the best residential parts of the town, localities in which the services of a Health Visitor are not as a rule required. This arrangement appears to be a fair and satisfactory one, and further reference to the labours of the Health Visitors will be made when dealing with the sanitary work done during the past year.

The Council have also confirmed the recommendation of The Education Committee, that your Medical Officer be appointed Supervising Officer for the Medical Inspection of School Children, and have, in addition, engaged the services of a highly qualified medical man, by whom the actual work of inspection will be carried out. This arrangement is a tentative one, and it remains to be seen how far, and how thoroughly, the requirements of the Board of Education can thus be complied with.

Since these schemes come into operation during the present year, they are somewhat outside the scope of last year's Report, but I now deal with them, since their inception and general arrangement was part of last year's work.

The remaining causes of death do not call for much explanation or comment. The deaths of 111 old people were ascribed to "Old Age," as meaning a gradual decay of vital force without the presence of any actual organic disease. Of the 65 deaths registered as due to violence, 13 were caused by suicide and 52 by various kinds of accident. Other diseases, that is diseases coming under neither one or other of the headings already dealt with, accounted for the deaths of 701 persons of various ages. Further information as to these deaths is given in Table No. IVA. Various forms of Heart Disease occasioned 215 deaths; whilst 116 were ascribed to Cancer, including Epithelioma, Sarcoma, Lupus, and other forms

of malignant growth. Alcoholic excess, in the majority of cases connected with Cirrhosis of the Liver, accounted for 25 deaths, though, for obvious reasons, this is probably much below the number which might have been directly or indirectly traced—and therefore registered—as due to this habit.

The deaths due to Puerperal Fever were fortunately few in number, 5 cases having been notified, of which 1 terminated fatally. In addition, 11 deaths were registered as due to Parturition, and were caused by adverse circumstances—hæmorrhage, exhaustion, abnormal presentations, &c., without any suspicion of infection, or septic mischief.

No doubt the Registration of Midwives, and the knowledge that they are now bound to attend to, and carry out certain regulations, enjoining personal cleanliness, caution in the treatment of their patients, &c., has had a good effect upon those women who have obtained the certificate, and the consequent right to be placed upon the Roll of Midwives. They are bound to keep a record of all cases that they attend, and are liable at any time to an examination as to the condition of the appliances with which they are bound to be provided, as well as to their personal cleanliness, and that of their homes and surroundings.

Unfortunately, there are a number of women who continue to attend confinements without having passed any examination, or even obtained the certificate, on the ground of having been in practice before the passing of the Act. So long as they do not advertise themselves as midwives, this cannot at present be prevented, but it is well that they should know that although they may not be liable to the same examination and supervision as the regular certified midwife, any evil consequence to either mother or child, resulting from ignorance, dirt, or want of proper care on their part, will be closely enquired into, and if neglect be proved, will be severely punished.

It is a grave responsibility for any woman to have upon her hands, even for a time, the well-being of mother and infant, but this is often undertaken in a reckless hap-hazard fashion, bred of ignorance, but which happily in an astonishingly few number of cases is followed by any serious result.

The number of midwives whose names appear on the Roll for the Borough is 52. One certificate was cancelled by the Central Board during the past year, the nature of the offence being that of neglecting to send for medical assistance in a severe case of hæmorrhage. After a statement of the facts had been forwarded to the Board, the matter was under consideration for a considerable time, and the offending midwife was then notified to attend personally or by representative before the Board in London, and answer, as best she could,

the charges made against her. She failed to appear, and the Board decided that the charge was made out, and was of a sufficiently serious nature to warrant the removal of her name from the list of Certified Midwives. Her certificate was accordingly cancelled, and was ordered to be returned to head quarters.

Reports received from Midwives during the year showed that on 20 occasions Medical Assistance had been called in; of these, 17 referred to some dangerous condition to the mother, attendant or closely following upon parturition, and 3 to some abnormal condition of the newly born infant.

In addition to inspections at their own homes, and to occasional interviews necessitated by enquiry into some particular case, each midwife was personally seen by myself, and, at the same time, an examination was made as to the condition of her appliances, and the record of her cases in the Register.

The total number of deaths from all causes, and at all age periods, throughout the town, has been 2,003, equal to a rate of 17·10 per thousand of the population. The latter is estimated by the Registrar General at 117,093, but I must again, in connection with this matter, draw attention to what appears to be a curious and unaccountable circumstance.

In the year 1900, the population was estimated at 118,902, but after the census, taken in the succeeding year, it was reduced to 113,117. Since then there has been a natural increase of 8,585 lives, whereas 3,976 only have been added to the population, so that if this be correct, in spite of good times, and increased mills and workshops, 4,609 more persons must have left the town than have come into it. Again, if prior to the census of 1900 the population was so much over-estimated, the death-rates for that and the preceding years must have been equally under-estimated, and the improvement which has since taken place must have been much greater than is shown.

I would also again point out, as I have done in former Reports, that any slight discrepancy between the figures given in the various tables is due to the fact that in the forms required by the Local Government Board the deaths in the Workhouse—situated outside the Borough boundaries—are included, which is not the case in those used for our weekly and monthly returns.

The Births for the year numbered 3,124, and represent a rate of 26·68 per thousand, the lowest that has been recorded within the Borough for at any rate the last fifty years. It is but slightly above the rate for the whole of the Kingdom, and this, on the authority of the Registrar General, is absolutely the lowest on record. This is a startling fact, and the gradual but steady decrease in the national birthrate, cannot but be looked upon as a national misfortune.

The causes which have led up to this deplorable condition, have been dealt with in the Reports for the past few years, and I do not further comment upon them now, believing that the question is one of sufficient importance to demand, and receive, a full enquiry.

Although the birth-rate has been so low, the more than proportionate reduction in the rate of mortality leaves a favourable balance of 1,121 lives—the difference between the number of births and deaths—for the year.

The general work of the Sanitary Inspectors is summarised and set forth in the Tables, which as usual are appended to this Report.

The work of doing away with offensive privies and ashpits, and of substituting in their place water-closets and movable ash-pails, has been continued, but although some of more recent erection still remain to be dealt with, the great number have now been converted, and the town no longer has the misfortune to belong to the privy-midden system. In certain parts of the town, notably in No. 3 District these offensive accumulations are practically abolished, although a very few may here and there be found in which, although notice has been served, the execution of the required work has been deferred, on account of disputed ownership or some other cause calling for temporary delay. The good effect upon the health of the town resulting from this work, which has now for so many years been steadily going on, cannot be overestimated, and to it must be ascribed a good share of the reduction in the death rate.

Formerly the condition most commonly found was that the confined spaces at the backs of two long parallel rows of houses was largely taken up by a central chain of these offensive receptacles in which excreta and household refuse were stored for periods of six months or even longer.

As a consequence the air, stagnant because confined by buildings on all sides was poisoned by offensive exhalations, and these, finding their way into the houses could not fail to act injuriously upon the health of the inmates. Bad as it was throughout the whole of the year, this condition was intensified during the summer months, when changes of putrefaction and fermentation are so readily set up. Again the yards were almost invariably pebble paved, and the subsoil, for a depth of some inches, became polluted with the liquid refuse thrown upon the surface.

When the ashpit was emptied some of the contents were left upon this pervious yard surface, and the bulk was deposited in the street, opposite the front door, where it remained until removed by the collecting cart. In some instances, where there was no access to the back yard, the ashpit contents had to be removed through the house. All this has now been altered, and though there still remain a number of yards which require flagging, the majority

of the houses have water-closets, whilst many have yards covered with flags, laid to such a gradient that the surface water must be carried off by the gully. Such improvements must have a marked effect upon the health of the people, and it is only to be regretted that in some instances the work done on their behalf, is not appreciated by the people interested, and the water-closet is allowed to get out of order, whilst the yard is dirty, and littered up with useless rubbish. However small the space at the back of a house may be, there is, under the improved conditions, no reason why there should be anything offensive, or likely to be productive of disease, but a certain amount of care is necessary on the part of the householder. The property owner, upon whom falls the cost of improvement, has just cause for complaint that in some instances this necessary care is not given.

In addition to the homes of the working classes, the factories and workshops, in which are spent their hours of labour, have received regular attention, and in this direction improvements of various kinds have been carried out. There are no actually dangerous occupations in the town, whilst the trades which may be classed as offensive are few in number. They principally consist of fat melting and tripe boiling establishments, and in these strict cleanliness has been enforced, whilst every effort has been made to reduce to a minimum the smells which, in summer time especially, cannot be altogether prevented.

The Common Lodging Houses have been regularly visited and on the whole there is an improvement in their general character and condition. The smaller ones, those formed out of one or more ordinary cottage houses, are more difficult of supervision than those on a larger scale, where the building has either been erected for the specific purpose, or else has been one large enough to admit of its being adapted to the requirements of a lodging house.

But little change has taken place amongst the Canal Boats, and the following Report, a copy of that already forwarded to the Local Government Board, gives full information as to their condition during the past year:—

COUNTY BOROUGH OF PRESTON.

CANAL BOATS ACTS, 1877 AND 1884.

The following Report deals with the condition of the Canal Boats, coming under the jurisdiction of this Sanitary Authority, for the past year of 1907.

In August, Inspector Livesey, who for a number of years had held the office of Canal Boat Inspector, left the service of the Corporation upon taking up another appointment. Inspector E. Crossthwaite was transferred to the vacant Sanitary district, and was also appointed Inspector of Canal Boats. He holds the office upon the same terms, no special remuneration being given for this portion of his duties.

Few changes have taken place in the Canal Boats during the past year. One—"The Eliza," No 11—has been broken up, and the certificate has been returned to this office.

A new Boat—"The Royal Oak," No. 55—has been registered, thus leaving the same number of boats upon the Register as in the year previous, viz.—33.

Altogether 55 boats have been registered, and of this number 22 certificates have been cancelled.

Whenever a change of ownership has required the granting of a new certificate, advantage has been taken of this to reduce the number of occupants; and 5 boats have in this manner been dealt with.

Most of the boats have been inspected during the year, as have also several, registered at Lancaster, and trading with this town.

No cases of Infectious disease have been found upon the boats, nor have any such cases been notified as occurring amongst the occupants.

In 8 cases, infringements of the Regulations were found to be existing, but these were remedied by the Owners at the Inspector's request, and without recourse to legal proceedings.

One notice, served by another Authority, has also been investigated, and the notice form, duly signed, has been returned to the Authority by whom it was issued.

No children, of school going age, have been met with upon any of the boats.

The dead body of a young child, drowned at Burton, was found on board "The Iron Duke,"—No. 9—having been brought to Preston for interment. At the Inspector's request, burial took place without any necessary delay.

The following Table gives details of Occupation and Inspection during the past 11 years.

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
No. of Inspections ..	61	65	38	68	96	103	105	113	111	132
Males in occupation ..	45	44	48	88	104	113	140	142	146	169
Females Do. ..	23	20	26	40	48	38	64	71	59	67
Children Do. ..	28	21	32	48	46	29	53	68	53	46

All further details are shewn in the Statistical Supplement, which is as usual appended to this Report.

Although it was not necessary to close any of the schools on account of infectious disease, a number of them were disinfected, either on account of the presence of sickness, generally Measles, amongst the scholars, or because they were used for the purpose of Jumble Sales, when cast-off articles of various kinds, generally wearing apparel, are collected and brought together for the purpose of sale.

Although the systematic Medical Inspection of School Children will materially strengthen the relationship between the Health Authority and children of school-going age, there has now for some years past existed a fairly successful system by which cases of sickness, occurring amongst the children, are reported by the School Teachers to the Director of Education, and through him to the Health Office. Many of these reports refer to Measles and Whooping Cough, or to the other milder forms of Non-Notifiable Infectious Diseases, such as Chicken Pox, Mumps, Ringworm, &c.

Altogether, 1,772 such reports were received and dealt with during the year; and of this number 369 referred to very young children between the ages of 3—5 years, and 1,403 to those between the age period of 5 to 14 years. The prevalence of these diseases amongst the very young is shown by the fact that in the first age period (3—5 years), the percentage of cases of sickness was 17·2 of the number in attendance, against a percentage of 7·6 amongst the older children. Dividing the school-going age of 3—14 years into four periods, the cases reported were as follows, 3—5 years 369, 5—7 years 851, 7—10 years 417, and 10—14 years 136.

In the two following Tables the diseases met with amongst children of school-going age are divided into eight headings; a number of the milder forms being grouped together in the last one.

Table A gives a list of the schools in the town—42 in number—and shows how many cases of each form of illness occurred in each particular school during the year.

Table B shows the ages of the children affected by each disease, without regard to locality, classifying them as infants under the age of 3 years, and then in each year of age up to the maximum age of 14 years.

These Tables form a record from which it can be seen not only what school was most severely visited by any of the diseases in question, but also what part of the town, since the names of the schools follow one another in the order of proximity, and, where one school is seen to be the centre of a disease, those in the surrounding area will generally be found also to have been affected.

TABLE A.

	Typhoid Fever.	Scarlet Fever.	Measles.	Whooping Cough.	Diphtheria.	Chicken Pox.	Mumps.	Ringworm, Eczema, Sore Eyes, Heads, &c.
Parish Church	3	8	..	7	25	13
St. James	5	...	5	26	7
St. Augustine's	4	1	...	1	12	1
St. Saviour's	42	3	...	6	12	...
Grimshaw Street British	33	3	...	7	5	1
St. Stephen's	4	2	I	3	3	1
Christ Church	3	13	.	...	2	2
T. C. Hincksman	..	2	4	25	...	2	8	...
St. Mary's R. C.	...	I	...	22	...	10	36	17
St. Wilfrid's	4	6	...	...	1	3
St. Michael's	...	I	2	13	...	6	2	6
Sacred Heart	1	...	3	1	2
Ashton Wesleyan	3	17	...	29	2	5
St. Andrew's	1	14	...	4	21	2
Roebuck Street Council	2	6	...	2	1	6
St. Walburge's	...	2	3	17	..	14	5	4
St. Mark's	8	...	13	10	4
St. Peter's	49	23	...	8	9	1
Barlow Street Wesleyan	3	1	...	3	...	1
Emmanuel	43	15	2	3	3	5
Plungington Road National	...	2	...	7	...	1	...	1
Eldon Street Council	8	17	...	8	14	3
Moor Park Wesleyan	...	2	51	23	...	30	25	17
English Martyrs'	..	2	4	55	I	11	22	3
St. Jude's, Kent Street	...	1	5	18	...	1	7	5
St. Jude's, St. Paul's Road	19	11	...	4	2	4
St. Paul's	10	I	1	4	2
St. Ignatius' Elementary	6	16	...	20	16	38
St. Ignatius' Higher Grade	18	...	6	4	2
St. Thomas's	25	16	I	3	3	2
All Saints	1	14	...	11	5	3
Holy Trinity	...	2	...	3	...	...	20	2
Orchard U.M.F.C.	1	6	...	4	2	...
Roper's Boys	4	...	...	1	2
St. Luke's	5	25	...	21	22	40
St. Joseph's	...	2	2	29	...	7	5	38
St. Matthew's Higher Grade...
St. Matthew's Elementary	4	...	7	4	11
St. Matthew's Branch	...	I	1	2	...	1	1	2
Tennyson Road Wesleyan	1	2	...	...	1	4
St. Mary's National	7	23	...	5	4	18
St. Mary's Wesleyan	...	I	...	..	...	1	2	6

TABLE B.

	0—3	3—4	4—5	5—6	6—7	7—8	8—9	9—10	10—14	TOTAL
Typhoid Fever ...	...	...	...	...	1	...	...	...	1	2
Scarlet Fever ...	1	2	2	7	3	4	...	...	...	19
Measles ...	3	39	71	90	67	28	13	10	18	339
Whooping Cough...	2	39	84	150	109	62	19	14	27	506
Diphtheria ...	1	...	1	...	2	1	1	.	...	6
Chicken Pox ..	3	14	27	80	72	33	22	4	13	268
Mumps ...	...	9	40	73	91	48	35	19	33	348
Ringworm,Eczema, Sore Eyes, Heads, &c. ..	1	9	21	53	53	44	38	22	43	284

Upon receipt of these school reports, the cases were visited and dealt with by the Health Visitors, a summary of whose work in this, and other directions, is shown on Table 12. Every effort was made to enforce isolation in the case of children affected, and both they, and all children who had been in contact with them, were excluded from attendance at School until the expiration of the quarantine period. Posters referring to Measles and Whooping Cough, of which copies were given in the Annual Report for 1906 were also from time to time affixed in those parts of the town in which these diseases appeared to be making headway.

The Milk Supply of a town is always a matter of grave importance, and one having a direct bearing upon the health of the inhabitants, but more especially upon that of the infants and young children.

Throughout the year specimens of milk were submitted to chemical or bacteriological examination, and the cowsheds, dairies, and milkshops situated within the town received constant and regular inspection. In many instances improvements were effected, as regards the ventilation and drainage of the shippens, reduction in the size of the manure heaps, and greater cleanliness in the dairies and milk shops. But a great part of the town's milk supply comes from country farms situated outside the Borough limits, and over these the Local Authority has no direct supervision.

There is no doubt that too frequently there is a great want of care, and even of ordinary cleanliness, in the treatment of the cattle, in the process of milking, and in the sieving, cooling, and distribution of the milk. These conditions are more commonly found in the country shippens than in those within the town, probably due to a want of regular inspection, to the prevailing faith in the all-curative powers of country air, and to habits considered good enough in the past, and so handed on unchanged to the present time.

In Order to combat this condition of things, the following Notice was distributed to all cowkeepers and dealers in milk within the Borough, and also to all farmers bringing milk into the town, since they became, for the time, Purveyors of Milk.

Notice to Cowkeepers, Dairymen, and Purveyors of Milk.

The Health Committee being satisfied that milk is sold containing an unnecessary and dangerous number of germs or bacteria, the result of want of cleanliness, or of some serious defects in the methods of milking, or of handling and distributing the milk, are determined to adopt stringent methods to prevent the sale of such milk.

This Circular is issued for the information of Cowkeepers, &c., so that in their own interests they may observe those precautions necessary to preserve the milk in good condition and so prevent its being condemned.

The greater the cleanliness observed in milking, and in dealing with milk, the smaller will be the number of germs which the milk contains.

The more quickly the milk is cooled, and the lower the temperature at which it is kept, the fewer will be the germs which it contains.

The Shippens must be dry and well ventilated so as to keep the cattle in a healthy condition. They must be kept clean, so that the cattle will not become filthy from lying in the manure. They must be kept free from dust and cobwebs, but no sweeping must be done shortly before milking, otherwise dust, full of germs, will be raised and will settle on the milk.

Much of the dirt, found in milk, comes from the coat and udder of the cow.

At least one hour before milking the coat should therefore be groomed, especially on the milking side ; and the udder and the adjacent parts should be wiped with a clean damp cloth immediately before milking.

The milkers should thoroughly wash and dry their hands, and should wear loose clean sleeves, made of some washable material.

The Milk Pails, Kits, Sieves, &c., should be kept absolutely clean. Immediately after use they should be washed, sterilized with boiling water, and kept covered up, or placed upside down, to prevent the entrance of dust or dirt.

The milk should be quickly cooled to a temperature of 45 degrees F. or less. This can be done by placing the cans up to the neck in a tank of cold water, in which they should stand for at least an hour. Milk should never be allowed to stand in the sun.

Care should be taken to prevent the introduction of dirt in the process of "Kitting" or distribution to the consumer. The person serving should wear loose, clean, washable sleeves to prevent dust, &c., being shaken from the clothes into the large can, every time the measure or dipper is used.

In shops, the milk is frequently exposed in open earthenware pans or mugs, and so becomes fouled with dirt, flies, and the dust and smells given off from the other articles sold. To prevent this the pans should have a metal covering, conical or dome-shaped, furnished with a trap door which can be opened for the purpose of serving the milk.

No Cowkeeper, Dairyman, or Purveyor of Milk must allow anyone suffering from Infectious Disease, or who has been in contact with any person suffering from such disease, to have access to the cattle, or to have any connection with the milk or milk utensils.

There can be little doubt that attention to details of this kind on the part of those who supply the milk, combined with a little care and attention on the part of the consumer, after the milk has come into his possession, would have the effect of materially improving the milk supply, of reducing the chances of sickness, and so of greatly benefitting the public health.

One important part of the Sanitary Inspectors' work has been that of examining the the sanitary fittings, and, if necessary, of testing the drains of certain dwelling-houses. This has either been done on account of the presence of infectious disease in the house, because, by reason of smells, or some other condition, there has been a suspicion of defective drainage, or because a new tenant, entering upon a house, has wished to be satisfied that everything was in a fairly satisfactory condition. Whilst in some cases comparatively easy, in others the work has been difficult, and has demanded a considerable amount of technical skill; the difficulty being not infrequently increased by the fact that, since in former years no record appears to have been kept of the position and direction of the drains, their situation and course of flow had first to be ascertained, before any enquiry could be made as to their condition, and capacity for the work they were expected to perform. Although these conditions have not seldom entailed considerable expenditure of time and labour in making exploratory excavations, the question of having a sound and efficient drainage system is so important, and has such direct bearing upon the health of a household, that I again hold out an invitation to the head of any family who has reasonable grounds for suspecting defects in his drainage or sanitary appliances, to make application to the Health Office or myself, when a skilled examination will be made, and any defects brought to light will be remedied.

For some considerable time but little action has been taken with regard to the emission of dense smoke from the chimneys of mills and manufactories; but towards the close of the year the subject was again taken up, and a conference was held between your Committee and representatives of the leading manufacturers and mill-owners in the town.

The subject was fully discussed, and whilst the nuisance arising from the emission of black smoke, and the waste of fuel which such emission represents were readily admitted, the difficulties with which the whole subject is surrounded, the uncertain and unequal action of the various patents, and so-called cures, and the important part which the human stoker must always play, were also recognized, the result being a determination on the part of the Health Authority to try and abate the nuisance, and a willingness expressed by the mill-owners to do everything possible to assist, and co-operate in, the movement. It was arranged that an observation of all the mills and principal manufactories should be made every three months, and that a copy of the results should be forwarded to each employer, so that he might not only be able to see the record of his own chimney, but might be able to compare it with that of his neighbours.

The following course of procedure was also adopted. Where the amount of black smoke exceeded five minutes in the half hour, the attention of the offender was at the time drawn to the fact by the Inspector, who also forwarded a copy of the observation with a request from myself that the nuisance should be abated. If a second observation, taken some time during the succeeding month, showed that this had not been done, a formal notice was served requiring the abatement of the nuisance within a specified time, viz., a month. If a third observation showed that the specified limit was still exceeded, legal proceedings were instituted, and a summons issued in due course. From this it is evident that there is no desire to harass the offending party by undue haste, but rather to give him every opportunity to effect an improvement, or to make the best explanation that he can, together with a statement of the course he is prepared, and proposes, to adopt.

Observations to the number of 197 were taken, mainly during the latter part of the year, and, after the course of procedure just described had been carried out, legal proceedings were instituted against a large firm of manufacturers on account of the continued emission of black smoke from the chimney of one of their mills. An order was made for the abatement of the nuisance within three months, and for the payment of costs.

Articles, chiefly those in daily domestic use, to the number of 202, were purchased, with all the necessary legal formalities, and were afterwards submitted to analysis. The results were satisfactory, almost all of them being described as of genuine or passable quality. Of the exceptions, two samples were those of coffee, in one of which the adulteration with chicory was slight, and the vendor was simply cautioned; in the other, where the added chicory amounted to 35 per cent., there were extenuating circumstances, and though a summons was issued the case was not pressed, and was settled upon payment of costs. The 20 samples of whiskey were all returned as patent still spirit, 2 of them being diluted

slightly below the statutory limit. In these latter cases, the vendor received a cautionary letter.

In addition, 62 samples were purchased in an informal manner, that is without informing the vendor of the purpose for which they were obtained, or without observing the legal technicalities required if there is any possible intention of following up the case with legal proceedings. The object of such a purchase is to obtain a knowledge of the character of the articles sold, which will afterwards serve as a guide in future purchases. Of the articles thus obtained, 7 were more or less below the genuine standard, one sample of coffee containing almost half its weight of chicory.

Tables Nos. 15 and 16 give further information as to all the samples purchased, and the results of the analyses. There were in addition some 12 samples of milk submitted to bacteriological and microscopical examination, with a view to ascertain their degree of cleanliness, and the presence or otherwise of the tubercle bacillus.

These were taken from farms and cowsheds within the Borough boundaries, and were so far satisfactory that none gave evidence of tubercle, whilst, with 3 exceptions, all were clean.

This bears out what I have already said as to the generally superior cleanliness of the town shippens and dairies as compared with those of the country.

The 3 samples in question showed evidence of contamination from hairs, manurial dirt, and vegetable debris, probably derived from the ungroomed coats of the cows and the dirty hands of the milkers.

The persons responsible were informed as to the condition of the milk, and were cautioned as to the necessity for greater cleanliness in the future.

Meat to the amount of 93,163 lbs. was examined, condemned, and afterwards destroyed. This was voluntarily submitted to the Inspector's decision, and therefore there was no occasion for further legal proceedings. But in one instance the carcase of a diseased beast, about which no notice had been given, was discovered in a butcher's shop, evidently dressed and intended for human food. It was seized, and a magistrate's order was obtained for its destruction. Proceedings were afterwards taken against the owner, and, as the case was an exceedingly bad one, he was committed to prison for 3 months without the option of a fine.

A quantity of fish in a decomposed condition was also seized whilst being offered

for sale. This was also destroyed by order of a magistrate, but no further punishment has so far followed, since the vendor left the town before a summons could be served upon him.

Amongst the other prosecutions taken during the year was one in respect to adulterated milk, the sample of which had been purchased at the end of the previous year of 1906. The proceedings resulted in a fine of twenty shillings and costs.

Three cases of overcrowding were brought against the keepers of common lodging houses, and, the charges having been proved, fines of twenty shillings and costs were imposed.

The only other case which called for legal proceedings was that taken against a firm for causing an effluvium nuisance in the process of fat-melting.

This, like tripe-boiling and similar businesses, would be better carried on outside, rather than in the centre of a town, because in spite of care and mechanical appliances, it is practically impossible at all times to prevent an offensive smell. Where the fat is collected from various butchers, or is brought by train from a distance, it frequently during summer arrives in a heated and decomposed condition, and so causes a nuisance in its transit through the streets, and during the process of unloading and conveyance to the melting vat. The case in question was withdrawn upon payment of costs, a special apparatus having been fixed, and an undertaking given that no further nuisance should occur.

Further information respecting the cause and situation of the various deaths during the past year, and the work done to prevent disease and improve the public health, will be found in the numerous plans and tables which as usual are appended to this report.

In conclusion, I have to thank you for the opportunity afforded me in the month of July of attending—in company with your Chairman—the Congress of the Institute of Public Health, held at Douglas, Isle of Man, when many subjects of importance relating to sanitation and public health were dealt with and discussed.

H. O. PILKINGTON,

Medical Officer of Health.

THE ISOLATION HOSPITAL.

The formal opening of this Institution, the foundation stone of which was laid by Dr. D. W. Brown, Chairman of the Health Committee on Thursday, August 10th, 1905, took place on Thursday, June 6th. Sir Frederick Treves performed the opening ceremony, and for the next few days the building was thrown open for inspection by the public. Whilst a Notice, of which the following is a copy, was about the same time issued to the Medical profession :—

Dear Sir,

The Isolation Hospital, Deepdale Road, is now ready for the reception of Patients suffering from Scarlet Fever, Typhoid Fever, and Diphtheria.

It is intended for the treatment of those who are without proper care, nursing, or efficient isolation, or who for any other reason are likely to be of danger to the public health.

When notifying cases, I shall be obliged if you will add a note to the certificate, where you think the patient is suitable for removal.

I remain,

Your obedient servant,

H. O. PILKINGTON,

Medical Officer of Health.

The first patient, a case of Scarlet Fever, was admitted on June 14th, and since then, although the number of patients has of course varied from time to time, its services have been in constant demand. The following Table gives a return of the patients admitted up to the end of the year, together with results :—

Disease.	Admissions.	Deaths.	Recoveries.	Remaining.
Scarlet Fever ...	48	1	35	12
Typhoid Fever ...	27	5	8	14
Diphtheria ...	14	2	11	1

These figures, although by no means representing the total number of cases occurring in the town, serve to show how much an Isolation Hospital was needed. In the case of

many of the patients admitted, not only was it impossible to secure efficient isolation at home, but such absolute requirements as fresh air, good nursing, and suitable food were equally unattainable.

The removal of such cases to hospital not only greatly militated against the chance of the infection being conveyed elsewhere, but also gave the patient a much better chance of recovery from what in the majority of cases was a serious illness.

In estimating the relative number of deaths to admissions, it must be noted that several of the cases of Typhoid Fever were, if not moribund, in a practically hopeless condition at the time of their removal. One or two were suffering from Pneumonia, affecting both lungs, which not only to a great extent masked the symptoms of Enteric Fever, but also formed the immediate cause of death.

In a small number of cases, the mildness of the symptoms, and the rapid recovery of the patient, rendered it probable that the illness was due to Influenza, attacking the abdominal organs.

This appears to have been the recent prevalent form of Influenza, and in severe cases, and for the first week or two, it is often a difficult matter to decide definitely as to the exact nature of the illness.

The majority of the Scarlet Fever cases were of the mild type which has now been the prevailing one for some years past. Several of them were complicated with glandular enlargements, and discharges from the ears or nose. Sequelæ of this kind are very troublesome, and often tedious in duration, and are just the conditions which are apt to be overlooked, or imperfectly attended to, in the case of children who are nursed at home. Medical attendance has often ceased before the appearance of the conditions in question, and so they are either altogether neglected, or treatment is not obtained until in not a few instances permanent injury or disfigurement to the child has resulted. Amongst the many advantages attendant upon the patients removal to hospital, one very important one is the skilled nursing, with its accompaniments of cleanliness and regular treatment, which can thus be brought to bear upon children, who, although convalescent from the actual fever, are still suffering from one or other of the numerous after effects.

I do not propose to deal further at present with the hospital, or to enter upon the question of the cost of its management and upkeep, since the period of its working existence has been so short, but am satisfied that the necessity for its erection, and the value of its work will each year be more fully recognized.

H. O. PILKINGTON,
Medical Superintendent.

PORT SANITARY.

The work done in connection with Port inspection is set forth in Table No. 17, Inspector Baron continuing to carry out the work of examining officer.

Whilst there is a slight increase in the number of steamships inspected, there is a corresponding decrease as regards sailing vessels, due to the diminished number of the latter that, during the past year, has entered the river.

The defects that have been met with, and in due course remedied, are similar in character to those of former years ; while the aggregate number will also be found to be much the same.

Whilst some require the attention of the captain or owners, others are due to carelessness on the part of the crew, who thus suffer from faults of their own creation. In every instance when the insanitary condition was pointed out to the person or persons responsible, it was remedied, and this, in the great majority of cases without the necessity for formal notice.

In the month of February a suspected case of Cerebro-Spinal Fever occurred in the town, and though the post-mortem examination, and subsequent bacteriological testing of the Cerebro-Spinal Fluid showed that the disease was not of the infective type, it was at the time considered advisable to make it temporarily notifiable. This was done by permission of the Local Government Board, the order remaining in force for three months.

The disease at the time, and for some months previously had been present in Glasgow and Belfast, and it was necessary that vessels trading from these ports should be systematically inspected.

This was most carefully and regularly done from the beginning of the year up to the month of June, the Inspector visiting the dock at each tide, so that no vessel could escape observation.

No further action was however required, as no case of even a suspicious character was observable amongst any of those on board.

Only one case of infectious disease occurred during the year, and even this was not directly connected with the Port. The patient, a sailor, had landed at Newcastle from Philadelphia ; and after visiting Edinburgh, had come to Preston on Oct. 19th, being at the

time unwell. The case was reported as one of Typhoid Fever on Oct. 23rd, and the patient was at once removed to the Isolation Hospital. The fever was attended with double pneumonia, and on October 29th the patient succumbed after an attack of intestinal hæmorrhage.

The closets in connection with the Dock Offices, with the offices sublet to the Customs and Post Office Authorities, and with the Ribble Committees Workshops, are of a makeshift description, and have long been recognized to be of an insanitary, and therefore an unsatisfactory character.

A certain number of modern waterclosets have recently been provided for the Dock Offices, but these are not connected with the town's drainage system. The increased number of workmen employed in the Ribble Workshops has served to emphasize the very rude and primitive type of closet at present provided, and although the distance to the nearest sewer may exceed the hundred feet dealt with by the Public Health Act, it is to be hoped that the Ribble Committee—in whose hands the matter rests—will see the necessity for providing a sufficient number of suitable closets properly connected to the public sewer.

Privies are being abolished in all parts of the town; pail closets, however well looked after, are a constant source of nuisance; and a water closet cannot be effective unless provision is made for so dealing with the refuse matter that there is no possibility of its becoming a nuisance in the future.

The Dock Hospital, erected in 1893 for the purpose of dealing with possible cases of Water borne Cholera, has been maintained in effective working condition, so that, should its services be required, it can, at very short notice, be utilized.

H. O. PILKINGTON,

Medical Officer of Health,

Port Sanitary Authority.

TABLE No. 1.

Number and Causes of Deaths at different Ages, for the 52 weeks ended
28th December, 1907.

Cause of Death.	Under 1 Year.	1 to 5	5 to 15	15 to 25	25 to 65	65 and over.	Total.	Corres- ponding year, 1906	Corres- ponding year, 1905	Corres- ponding year, 1904	Average for the past six years.
Small Pox .....	..	..	..	..	..	..	..	..	1	7	1·66
Fever .....	..	1	1	2	13	..	17	21	17	29	24·50
Scarlatina .....	..	3	4	..	..	..	7	15	8	8	25·16
Measles	6	14	2	..	..	..	22	122	84	87	77·83
Diarrhoea	47	6	..	..	2	2	57	219	132	141	158·16
Whooping Cough	30	32	..	1	..	..	63	11	76	30	40·00
Diphtheria .....	..	11	3	..	..	..	14	16	17	21	18·50
Croup	2	4	..	..	..	..	6	9	12	10	11·33
Consumption	2	3	1	26	90	6	128	122	125	124	118·66
Bronchitis	89	54	1	2	79	66	291	236	230	278	246·83
Inflammation of Lungs....	31	24	6	15	64	23	163	104	105	121	117·33
Teething, Premature Births and Debility }	286	62	10	..	..	..	358	379	311	415	395·50
Old Age .....	..	..	..	..	8	103	111	86	88	121	102·16
Violence, &c.	2	6	4	9	39	5	65	61	75	57	62·66
Other Diseases .....	..	11	23	34	437	196	701	664	625	642	637·66
Total.....	495	231	55	89	732	401	2003	2065	1906	2091	2037·94

TABLE No. 2

Number and Causes of Deaths in each Month of the Year ending 28th December, 1907.

Cause of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Small Pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever	1	1	2	...	1	2	1	1	...	2	4	2	17
Scarlatina.....	...	2	2	1	...	...	...	...	1	...	...	1	7
Measles	3	1	...	...	1	1	1	1	1	4	2	7	22
Diarrhœa	1	3	...	2	...	1	4	5	7	26	6	2	57
Whooping Cough	7	5	7	14	11	4	7	1	1	5	1	...	63
Diphtheria	4	1	1	1	...	2	...	1	...	2	1	1	14
Croup .....	...	1	...	...	...	1	...	...	1	..	2	1	6
Consumption	13	8	11	12	15	7	15	11	8	8	16	4	128
Bronchitis	52	27	33	19	24	20	18	5	8	11	27	47	291
Inflammation of Lungs ...	25	13	20	20	14	10	12	5	8	11	10	15	163
Teething, Convulsions, &c..	45	34	39	30	33	25	25	11	25	34	21	36	358
Old Age	13	13	10	10	10	8	9	6	6	10	3	13	111
Violence, &c.	9	8	3	3	9	3	5	1	4	6	6	8	65
Other Diseases	77	57	52	60	73	54	59	47	43	55	56	68	701
Total.....	250	174	180	172	191	138	156	95	113	174	155	205	2003

TABLE No. 3

Number and Causes of Deaths in each Ward for the 52 weeks ended 28th December, 1907.

Wards.	Small Pox.	Fever.	Scarlatina.	Measles.	Diarrhoea.	Whooping Cough.	Diphtheria.	Croup.	Consumption.	Bronchitis.	Inflammation of Lungs.	Teething, Pre-mature Births, & Debility	Old Age.	Violence, &c.	Other Diseases.	Total Deaths.	Rate per 1000 per annum.	Total Births.	Rate per 1000 per annum.	Population.
St. John's Ward	2	..	5	12	1	1	..	14	26	15	41	10	6	58	191	16·17	329	27·86	11805
Avenham Ward	1	..	..	4	3	..	1	5	10	12	11	6	4	52	109	14·45	131	17·36	7542
Christ Church Wd.	..	1	..	1	4	2	..	1	13	19	12	24	9	4	50	140	15·49	238	26·33	9037
Ashton Ward	1	..	..	4	1	1	7	12	5	20	5	7	43	106	13·32	197	24·77	7953
Maudland Ward	1	..	..	1	4	..	1	6	22	15	21	14	1	38	124	15·38	200	24·82	8058
St. Peter's Ward..	8	7	13	..	..	11	43	25	38	6	1	57	209	18·92	373	33·78	11040
Moor Brook Ward	5	3	7	1	..	11	27	14	33	10	2	51	164	17·54	241	25·77	9350
Park Ward	2	4	3	9	16	4	..	20	35	19	52	14	5	79	262	17·22	414	27·22	15209
Trinity Ward	6	..	..	9	9	4	2	13	27	12	38	8	6	57	191	16·61	320	27·83	11495
Deepdale Ward	1	..	..	4	2	1	..	10	23	9	27	13	..	54	144	15·46	262	28·14	9310
Ribbleton Ward	3	..	..	3	2	2	..	6	25	11	30	8	3	44	137	15·60	250	28·48	8778
Fishwick Ward	1	..	1	..	..	..	8	14	10	15	6	1	52	108	14·36	168	22·35	7516
Gaol, Infirmary, &c.	1	..	..	..	..	..	4	8	4	8	2	25	66	118	..	1	..	..
Total.....	..	17	7	22	57	63	14	6	128	291	163	358	111	65	701	2003	17·10	3124	26·68	117093

Death Rate per annum, per 1,000 of the Population, for the Year17·10
Do. Do. Do. Average for 10 years.....18·47
Infantile Mortality (Deaths under one year per 1,000 Births) for the Year158·00
Do. Do. Do. Average for 10 years..... 197·00
Per centage of Deaths under one year to total deaths for the year.....24·71
Do. Do. Do. Average for 10 years30·85

TABLE No. 4

Number of Deaths in each Ward during each Month of 1907.

WARDS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
St. John's Ward.....	21	21	16	12	11	16	20	6	10	19	11	28	191
Avenham Ward	14	11	11	10	12	9	9	5	5	10	8	5	109
Christ Church Ward	18	10	13	16	8	9	12	7	10	10	11	16	140
Ashton Ward	12	9	11	9	8	7	6	5	6	8	15	10	106
Maudland Ward.....	19	11	12	10	19	8	10	4	3	11	8	9	124
St. Peter's Ward.....	32	18	6	24	28	11	14	12	10	17	10	27	209
Moor Brook Ward	22	13	17	14	14	12	11	10	7	15	13	16	164
Park Ward	30	23	22	21	22	18	24	9	16	29	22	26	262
Trinity Ward	28	16	17	13	23	14	12	11	12	15	16	14	191
Deepdale Ward	19	12	15	13	11	9	14	12	11	12	9	7	144
Ribbleton Ward	17	9	17	9	9	11	8	5	9	12	15	16	137
Fishwick Ward	7	15	10	12	10	10	10	3	5	8	6	12	108
Gaol, Infirmary. &c.....	11	6	13	9	16	4	6	6	9	8	11	19	118
Total.....	250	174	180	172	191	138	156	95	113	174	155	205	2003

TABLE 1A.

Vital Statistics of Whole District during 1907 and Previous Years.

Year.	Population estimated to Middle of each Year.	Births.		Deaths under 1 Year of Age.		Deaths at all Ages. Total.		Total Deaths in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District. (Work-house).	Deaths at all Ages. Nett.	
		Number	Rate*	Number	Rate per 1,000 Births registered	Number	Rate*			Number	Rate*
1897	115,103	3687	32.03	954	263	2687	23.34	63	166	2853	24.78
1898	116,356	3559	30.58	812	221	2107	18.10	81	138	2245	19.29
1899	117,622	3492	29.68	889	255	2492	21.18	85	181	2673	22.72
1900	118,902	3410	28.67	814	236	2636	22.16	66	200	2836	23.85
1901	113,117	3418	30.21	737	218	2213	19.56	75	149	2362	20.88
1902	113,766	3278	28.81	618	188	1998	17.56	61	144	2142	18.82
1903	114,404	3453	30.18	541	156	1955	17.08	66	135	2090	18.26
1904	115,055	3314	28.26	609	183	2091	17.83	79	149	2240	19.10
1905	115,721	3259	28.16	490	150	1906	16.47	90	169	2075	17.93
1906	116,399	3317	28.49	665	200	2065	17.74	85	170	2235	19.20
Averages for years 1897-1906	115,644	3418	29.50	712	207	2215	19.10	75	160	2375	20.48
1907	117,093	3124	26.68	495	158	2003	17.10	118	211	2214	18.90

* Rates calculated per 1,000 of estimated population.

Area of District in acres (exclusive of area covered by water) } 3,721.

Total population at all ages..... 112,982
 Number of inhabited Houses 24,194
 Average number of persons per house... 4.66

} At Census of 1901.

TABLE 2A.

Vital Statistics of separate Localities in 1907 and previous years.

Localities.	1901				1902				1903				1904				1905				1906				1907.			
	Population estimated to middle of year.	Births registered	Deaths at all Ages	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of year.	Births registered	Deaths at all ages.	Deaths under 1 year.
St. John's Ward ...	11409	378	212	65	11495	354	217	71	11555	373	193	59	11630	346	232	64	11685	314	211	62	11745	325	219	73	11805	329	191	54
Avenham Ward	7363	132	110	22	7394	101	82	13	7422	135	91	16	7462	141	116	14	7482	141	107	19	7502	146	105	44	7542	131	109	20
Christ Church Ward.	8753	254	159	48	8787	239	147	42	8837	269	137	48	8887	271	123	48	8927	242	137	35	8987	258	153	25	9037	238	140	37
Ashton Ward.....	7688	210	98	33	7728	205	109	26	7758	231	110	32	7793	235	135	39	7838	220	108	21	7903	231	100	20	7953	197	106	21
Maudland Ward ...	7783	213	130	50	7823	233	138	44	7873	227	125	38	7908	224	146	49	7948	231	123	39	7998	224	108	31	8058	200	124	32
St. Peter's Ward ...	10597	352	213	67	10655	324	176	61	10735	383	201	63	10820	346	180	64	10900	372	192	65	10970	357	220	82	11040	373	209	63
Moor Brook Ward...	9080	315	183	78	9119	264	138	47	9167	258	153	42	9201	239	156	44	9250	241	120	33	9300	257	147	46	9350	241	164	44
Park Ward.....	14592	492	290	124	14701	482	265	91	14791	490	280	81	14880	447	271	80	15030	456	247	76	15125	466	267	104	15209	414	262	76
Trinity Ward	11098	338	243	66	11185	319	249	83	11267	318	202	50	11330	323	218	71	11400	304	209	46	11435	298	239	97	11495	320	191	51
Deepdale Ward	8986	272	156	62	9020	284	149	51	9060	281	129	30	9120	301	187	55	9170	280	151	39	9240	307	167	56	9310	262	144	36
Ribbleton Ward.....	8506	266	201	68	8547	248	144	54	8597	275	159	56	8630	212	139	37	8670	247	111	27	8728	264	147	54	8773	250	137	42
Fishwick Ward	7262	195	143	50	7302	196	123	35	7324	212	109	24	7380	227	109	39	7421	208	100	28	7466	182	108	33	7516	168	108	19
Public Institutions...	...	1	75	5	...	5	61	4	...	1	66	2	...	2	79	5	...	3	90	...	...	2	85	...	...	1	118	...

TABLE 3A.

Cases of Infectious Disease notified during the Year 1907.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH LOCALITY.													
	At all ages.	At Ages—Years.						St. John's Ward.	Avenham Ward.	Christ Church Ward.	Ashton Ward.	Mandland Ward.	St. Peter's Ward.	Moorbrook Ward.	Park Ward.	Trinity Ward.	Deepdale Ward.	Ribbleson Ward.	Fishwick Ward.	Gaol, Infirmary, &c.	Removed to Hospital.
		Under 1 Year.	1 to 5	5 to 15	15 to 25	25 to 65	65 and up-wards.														
Small Pox ... ..	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera... ..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup...	61	1	27	22	7	4	...	5	9	7	2	2	4	4	10	6	4	5	3	...	14
Erysipelas	73	...	...	5	13	51	4	12	5	3	4	3	10	3	8	10	1	10	3	1	...
Scarlet Fever	247	2	93	137	11	4	...	13	10	17	39	30	19	4	40	21	24	18	11	1	48
Typhus Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	113	...	13	36	25	39	...	18	3	6	7	3	12	9	17	12	11	11	3	1	27
Relapsing Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	5	...	...	3	2	...	...	...	1	1	...	...	...	1	1	...	1	...	...	...	1
Puerperal Fever	5	...	...	...	...	5	...	...	1	1	...	...	2	...	...	...	1	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	504	3	133	203	58	103	4	48	29	35	52	38	47	21	76	49	42	44	20	3	90

TABLE 4A.

Causes of, and Ages at, Death during the Year, 1907.

CAUSES OF DEATH.	Deaths at the subjoined ages, whether occurring in or beyond the District.							Deaths in Localities at all ages.												Deaths in Public Institutions.	Deaths in Workhouse.
	All Ages.	Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up-wards.	St. John's Ward.	Avenham Ward.	Christ Church Ward.	Ashton Ward.	Maudland Ward.	St. Peter's Ward.	Moorbrook Ward.	Park Ward.	Trinity Ward.	Deepdale Ward.	Ribbleton Ward.	Fishwick Ward.		
Small Pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	22	7	13	2	...	...	...	5	...	1	...	...	8	5	3	...	...	...	...	...	...
Scarlet Fever	7	...	3	4	...	...	...	...	...	...	1	...	...	...	4	...	...	...	1	1	...
Whooping Cough	63	31	32	...	...	...	...	1	3	2	4	4	13	7	16	9	2	2	...	...	...
Diphtheria and Membranous Croup ...	14	...	11	3	...	...	...	1	...	...	1	...	...	1	4	4	1	2	...	...	...
Croup	6	2	4	...	...	...	...	...	1	1	1	1	...	...	..	2	...	...	...	...	...
Fever { Typhus ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric	17	...	1	1	3	12	...	2	1	1	...	1	...	...	2	6	1	3	...	...	...
Other continued ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza.....	22	...	1	...	1	11	9	4	3	2	1	1	...	...	1	2	1	3	4	...	...
Cholera .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	62	50	6	...	...	3	3	12	4	4	...	1	7	4	9	9	4	4	1	...	3
Enteritis	14	8	1	...	2	...	3	3	1	1	1	1	...	1	1	1	...	1	1	...	2
Puerperal Fever ...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Erysipelas ...	2	...	...	...	...	2	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
Other Septic Diseases .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis	138	2	4	1	24	101	6	14	5	13	5	6	11	11	20	12	10	5	9	4	13
Other Tubercular Diseases...	63	20	24	5	5	9	...	8	1	2	7	2	6	5	10	7	2	4	1	7	1
Cancer, Malignant Disease	116	...	1	...	...	73	42	6	11	5	8	2	5	7	19	8	7	4	10	7	17
Bronchitis	312	87	54	1	2	89	79	26	10	19	12	21	43	26	35	27	23	26	14	8	22
Pneumonia ...	180	29	24	7	16	75	29	16	12	12	5	15	25	14	19	13	9	11	10	4	15
Pleurisy .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Respiratory Organs	7	...	...	...	...	7	...	...	...	...	...	...	2	1	...	...	...	...	...	3	1
Alcoholism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver }	25	...	...	...	1	22	2	3	3	...	...	...	5	2	3	4	2	...	1	...	2
Venereal Diseases	10	10	...	...	...	...	...	1	...	1	2	..	...	2	1	3	...	...	...	...	...
Premature Birth	92	92	...	...	...	...	...	14	2	9	3	6	7	9	13	7	5	7	8	...	2
Diseases and Accidents of Parturition	11	...	...	...	1	10	...	1	1	1	1	1	1	...	1	2	1	...	...	...	1
Heart Diseases	215	2	3	6	6	129	69	11	11	15	15	17	16	11	26	19	15	11	12	7	29
Accidents	52	2	6	4	9	27	4	3	4	4	5	1	1	1	4	3	...	2	1	23	...
Suicides	13	...	...	...	...	13	...	3	...	...	2	...	...	1	1	3	...	1	...	2	...
Old Age	146	...	...	...	...	9	137	10	6	9	5	14	6	9	15	8	13	8	6	2	35
All other causes	604	162	47	20	22	231	122	47	30	38	27	30	53	47	53	42	47	43	29	50	68
All causes ...	2214	504	235	54	92	824	505	191	109	140	106	124	209	164	262	191	144	137	108	118	211

TABLE 5A.

Deaths from stated Causes in Weeks and Months under One Year of Age during the Year 1907.

Cause of Death.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes :—																	
Certified .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Uncertified .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Common Infectious Diseases :—																	
Small Pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken Pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles .....	..	..	..	..	..	1	..	..	1	1	1	..	2	..	..	1	7
Scarlet Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria : Membranous Croup ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough ...	..	..	..	..	..	3	3	3	1	6	1	3	2	3	3	2	30
Diarrhoeal Diseases :—																	
Diarrhoea, all forms .....	..	2	..	2	4	8	6	9	5	3	6	1	2	1	..	2	47
Enteritis, Muco Enteritis, Gastro Enteritis	1	..	..	2	3	..	..	..	4	..	..	..	..	..	..	..	7
Gastritis, Gastro-intestinal Catarrh...	..	..	..	..	..	3	..	2	1	1	..	..	..	..	..	..	7
Wasting Diseases :—																	
Premature Birth	62	10	3	2	77	8	2	1	..	..	..	..	..	1	..	..	89
Congenital Defects	5	1	2	..	8	..	1	..	1	..	..	..	..	..	..	..	10
Injury at Birth	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Want of Breast Milk .....	..	..	..	..	..	2	1	1	..	..	..	..	..	..	..	..	4
Atrophy, Debility, Marasmus ...	14	6	2	2	24	12	10	4	6	6	7	2	3	3	3	2	82
Tuberculous Diseases :—																	
Tuberculous Meningitis ...	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	2
Tuberculous Peritonitis · Tabes Mesenterica .....	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	1	4
Other Tuberculous Diseases ...	..	..	..	..	..	3	1	1	..	..	1	3	2	..	1	..	12
Erysipelas .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis .....	..	..	..	1	1	2	1	2	1	1	1	..	..	..	1	..	10
Rickets ...	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Meningitis (not Tuberculous) ...	1	..	..	..	1	1	..	..	..	..	1	..	..	1	..	..	4
Convulsions ...	4	4	2	1	11	4	5	1	3	1	2	2	2	1	1	..	33
Bronchitis	2	1	4	1	8	6	6	10	8	13	6	7	4	8	6	7	89
Laryngitis ...	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	2
Pneumonia	1	..	..	..	1	2	5	..	2	3	2	4	2	3	1	3	28
Suffocation, overlying ...	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2
Other Causes	1	1	3	..	5	3	1	1	1	..	3	3	1	2	3	1	24
Total	93	25	16	11	145	58	46	35	35	35	32	26	21	23	20	19	495

Population, estimated to middle of 1907..... 117,093

Births in the Year, Legitimate 2,984

Do. Illegitimate 140

Deaths from all Causes at all Ages ... 2,003

TABLE No. 5.

Birth Rate, Death Rate and Analysis of the Zymotic Death Rate, in 39 of the largest English Towns, for the 52 Weeks ending 28th December, 1907.

Name of Town.	Estimated Population 1907.	Birth Rate.	Recorded Death Rate.	ZYMOTIC DEATH RATE.								Deaths under one Year to 1,000 Births.
				Small Pox.	Meas-les.	Scar-let Fever,	Diph-theria.	Who'p-ing Cough	Fever.	Diarr-hoea.	Total.	
London	4,758,218	25·6	14·6	—	0·38	0·14	0·16	0·38	0·04	0·32	1·42	116
Croydon	154,342	25·7	12·4	—	0·05	0·08	0·27	0·23	0·01	0·25	0·89	94
West Ham	308,284	28·6	14·6	—	0·51	0·18	0·24	0·54	0·05	0·66	2·18	131
Brighton	129,023	21·1	14·7	—	0·10	—	0·12	0·27	0·02	0·33	0·84	113
Portsmouth	208,291	27·9	16·0	—	0·81	0·02	0·29	0·27	0·14	0·29	1·82	123
Norwich	119,191	25·0	14·6	—	0·03	0·02	0·38	0·34	0·10	0·46	1·33	125
Plymouth	120,063	23·2	14·7	—	0·21	0·03	0·13	0·09	0·06	0·34	0·86	110
Bristol	367,979	24·3	13·2	—	0·09	0·07	0·17	0·10	0·04	0·32	0·79	100
Wolverhampton	102,016	26·4	15·1	—	0·22	0·24	0·26	0·16	0·07	0·49	1·44	130
Birmingham ...	553,155	28·3	16·2	—	0·57	0·17	0·18	0·34	0·09	0·43	1·78	147
Leicester	236,124	23·2	12·7	—	0·27	0·17	0·07	0·06	0·02	0·31	0·90	131
Nottingham	257,489	26·8	17·5	—	0·78	0·02	0·16	0·51	0·15	0·63	2·25	165
Derby	125,774	25·1	14·3	—	0·63	0·03	0·42	0·18	0·14	0·20	1·60	121
Birkenhead	118,553	31·2	15·4	—	1·10	0·10	0·20	0·15	0·09	0·31	1·95	110
Liverpool	746,144	31·8	19·0	—	0·39	0·18	0·15	0·43	0·13	0·73	2·01	144
Bolton	182,917	24·4	16·8	—	1·29	0·18	0·12	0·35	0·14	0·41	2·49	146
Manchester	643,148	28·7	18·1	—	0·36	0·16	0·16	0·49	0·05	0·50	1·72	146
Salford	236,670	29·2	17·7	—	0·44	0·26	0·31	0·61	0·08	0·44	2·14	140
Oldham	141,730	26·5	19·4	—	0·24	0·12	0·13	0·47	0·03	0·53	1·52	144
Burnley	103,947	28·5	17·6	—	0·07	0·13	0·14	0·28	0·11	0·69	1·42	158
Blackburn	134,980	24·8	16·9	—	0·36	0·14	0·13	0·33	0·10	0·28	1·34	153
Preston	117,093	26·8	19·1	—	0·21	0·06	0·10	0·60	0·15	0·54	1·66	158
Huddersfield ...	94,814	23·2	16·9	—	0·11	0·06	0·08	0·18	0·12	0·22	0·77	97
Halifax	110,138	17·4	14·3	—	0·05	0·02	0·26	0·10	0·07	0·18	0·68	103
Bradford	290,323	20·0	14·8	—	0·17	0·04	0·15	0·28	0·08	0·17	0·89	124
Leeds	470,268	24·9	15·3	—	0·22	0·12	0·14	0·34	0·06	0·38	1·26	130
Sheffield	455,553	30·9	17·1	—	0·86	0·23	0·12	0·35	0·09	0·99	2·64	145
Hull	266,762	28·8	16·1	—	0·66	0·06	0·25	0·37	0·06	0·37	1·77	127
Sunderland	156,029	34·3	19·2	—	0·64	0·14	0·27	0·27	0·07	0·45	1·84	130
Gateshead	125,783	30·7	15·4	—	0·46	0·05	0·25	0·36	0·08	0·37	1·57	136
Newcastle	272,969	29·7	15·9	—	0·44	0·08	0·19	0·48	0·04	0·14	1·37	123
Cardiff	187,620	26·0	15·0	0·01	0·95	0·11	0·12	0·30	0·07	0·34	1·90	131
Swansea	97,324	32·5	17·9	—	0·14	0·05	0·12	0·40	0·04	0·52	1·27	132
Warrington.....	70,269	33·6	16·1	—	0·78	0·17	0·20	0·16	0·09	0·61	2·01	121
St. Helens	92,476	34·2	18·5	—	1·63	0·11	0·12	0·56	0·14	0·43	2·99	155
Stockport	100,986	26·9	17·7	—	0·22	0·12	0·18	0·47	0·08	0·46	1·53	159
Middlesborough	101,783	34·2	20·3	—	1·00	0·09	0·34	0·53	0·16	0·73	2·85	158
South Shields ...	113,460	29·0	16·7	—	0·44	0·10	0·15	0·47	0·05	0·15	1·36	133
Northampton ...	95,070	20·6	12·3	—	0·31	0·07	0·05	0·12	0·02	0·33	0·90	122

TABLE No. 6.

The estimated Population, Number of Births and Deaths, Rates per thousand, and natural increase in the Borough, for each year since 1841.

Years.	Estimated Population.	No. of Deaths.	Death Rate per 1000.	No. of Births.	Birth Rate per 1000.	Natural Increase.
1841	51,000	1508	29.57	1974	38.70	466
1842	52,840	1550	29.33	1944	36.79	394
1843	54,680	1459	26.38	1975	36.12	516
1844	56,520	1380	24.42	2200	38.92	820
1845	58,360	1635	28.01	2293	39.29	558
1846	60,200	2189	36.36	2475	41.09	286
1847	62,050	2059	33.18	2268	36.59	209
1848	63,900	1550	24.26	2223	34.79	673
1849	65,750	1751	26.63	2403	36.55	652
1850	67,000	1745	25.81	2649	39.19	904
1851	69,450	2241	32.26	2803	40.36	562
1852	70,850	2284	32.23	2998	42.31	714
1853	72,250	2346	32.47	3072	42.51	726
1854	73,600	2013	27.35	3037	41.26	1024
1855	75,000	2557	34.10	3071	40.95	514
1856	76,400	2251	29.46	3151	41.24	900
1857	77,800	2131	27.39	3286	42.24	1155
1858	79,200	2545	32.13	3082	38.91	537
1859	80,600	2111	26.19	3399	42.17	1288
1860	82,000	2236	27.27	3381	41.23	1145
1861	82,985	2585	31.15	3626	43.69	1041
1862	83,231	2411	28.97	3522	42.32	1111
1863	83,477	2142	25.66	3388	40.57	1246
1864	83,686	2432	29.06	3422	40.89	990
1865	83,932	2708	32.26	3338	39.77	630
1866	84,178	2854	33.90	3535	41.99	681
1867	84,424	2608	30.89	3732	44.20	1124
1868	84,670	2798	33.04	3710	43.82	912
1869	84,916	2248	26.47	3434	40.44	1186
1870	85,162	2406	28.25	3486	40.93	1080
1871	85,427	2541	29.75	3438	40.24	897
1872	85,654	2294	26.78	3704	43.24	1410
1873	86,000	2899	33.71	3558	41.37	659
1874	86,000	2962	34.44	3582	41.65	620
1875	86,000	2581	30.01	3499	40.68	918
1876	86,600	2331	26.92	3623	41.84	1292
1877	87,000	2336	26.85	3601	41.39	1265
1878	87,300	2502	28.66	3697	42.35	1195
1879	87,600	2395	27.34	3403	38.83	1068
1880	88,000	2425	27.35	3475	39.49	1050
1881	96,524	2044	21.17	3489	36.14	1445
1882	97,656	2511	25.71	3785	38.76	1214
1883	98,564	2345	23.79	3576	36.28	1231
1884	99,481	2540	25.53	3745	37.64	1205
1885	100,406	2563	25.52	3868	38.52	1305
1886	101,340	2769	27.32	3961	39.08	1192
1887	102,283	2703	26.42	3870	37.83	1167
1888	103,234	2326	22.53	3823	37.03	1497
1889	104,194	2019	28.97	3912	37.63	902
1890	105,163	3726	25.92	3718	35.35	992
1891	107,864	2807	26.02	3830	35.50	1023
1892	109,038	2481	22.75	3686	33.80	1205
1893	110,225	2753	24.97	3809	34.55	1056
1894	111,425	2186	19.61	3545	31.81	1359
1895	112,638	2528	22.44	3702	32.95	1174
1896	113,864	2191	19.24	3673	32.25	1482
1897	115,103	2687	23.34	3687	32.03	1000
1898	116,356	2107	18.10	3559	30.58	1452
1899	117,622	2492	21.18	3492	29.68	1000
1900	118,902	2636	22.16	3410	28.67	774
1901	113,117	2213	19.56	3418	30.21	1205
1902	113,766	1998	17.56	3278	28.81	1280
1903	114,404	1955	17.08	3453	30.18	1498
1904	115,055	2091	17.83	3314	28.26	1223
1905	115,721	1906	16.47	3259	28.16	1353
1906	116,399	2065	17.74	3317	28.49	1252
1907	117,093	2003	17.10	3124	26.68	1121

TABLE No. 7.

Per Centage of Deaths from Zymotic Diseases to Sickness reported during the
Year ending 31st December, 1907.

Disease.	No. of Cases Reported.	No. of Deaths.	Per centage.
Small Pox .....	...	...	...
Typhoid Fever	113	17	15 04
Scarlet Fever	247	7	2 83
Diphtheria	61	14	22 95
Puerperal Fever	5	1	20 00
Erysipelas	73	2	2 74

TABLE No. 8.

Meteorological Observations for the Year ending 31st December, 1907.

Month.	Attached Thermometer.	Barometer.	Barometer corrected to 32 deg. Fahr.	Hygrometer		Temperature in Shade.		Earth Thermometer		Mean Daily Temperature.	Humidity Saturation=100	Rainfall in inches.	Number of Deaths from	
				Dry Bulb.	Wet Bulb.	Maxi- mum	Mini- mum.	One Foot.	Four Feet.				Bronchitis.	Diarrhoea.
January	37·8	30·155	30·272	4 weeks 41·4	4 weeks 40·3	41·8	34·9	38·6	42·4	38·4	4 weeks 92	1·55	46	1
February ..	36·4	29·860	29·982	3 weeks 39·8	3 weeks 38·5	42·5	33·0	36·6	39·9	37·8	3 weeks 89	2·13	27	3
March.....	41·2	30·017	30·123	42·7	40·7	49·5	37·6	40·2	41·5	43·6	85	3·22	29	..
April	45·4	29·692	29·785	47·2	43·7	52·3	40·9	43·3	43·9	46·6	75	1·02	24	1
May.....	50·4	29·763	29·843	51·5	47·7	56·4	44·8	47·1	46·7	50·6	78	4·53	20	1
June.....	55·0	29·716	29·786	55·2	52·7	59·8	49·5	51·7	50·2	54·7	87	7·97	29	1
July	58·9	29·958	30·015	59·2	55·0	64·7	52·4	54·4	52·5	58·5	76	5·08	12	3
August	58·4	29·865	29·925	58·5	55·4	62·0	53·0	55·2	54·6	57·5	82	4·58	11	4
September ..	56·3	30·084	30·145	57·9	54·4	63·6	51·3	53·9	53·9	57·5	79	0·97	6	5
October	49·9	29·559	29·643	50·9	48·9	54·8	46·1	49·9	52·3	50·4	88	3·51	7	21
November ..	43·8	29·864	29·963	45·1	43·0	47·8	40·2	44·8	48·7	43·9	85	2·91	33	15
December ..	41·2	29·565	29·675	41·8	40·8	44·7	37·9	41·5	45·0	41·3	92	4·15	47	2

TABLE No. 9.

Summary of Work done during the Year 1907.

	No. 1 District.	No. 2 District.	No. 3 District	No. 4 District.	Total.
Number of Complaints received	197	890	311	435	1,833
Inspections of Dwelling Houses	2881	2382	3016	3796	12,075
" Infected Houses	173	617	181	143	1,114
" Lodging Houses	115	1692	116	2852	4,875
" Cellar Dwellings .....	...	12	97	...	109
" Canal Boats .....	...	...	...	132	132
" Vans and Tents	4	58	44	163	269
" Schools.....	10	2	20	52	84
" Cowsheds, Dairies and Milkshops ...	179	17	152	239	587
" Slaughter Houses ...	47	13	91	29	180
" Markets	12	138	36	582	768
" Drains	3708	2969	3177	3168	13,022
Re-Inspections	2079	4853	2127	1722	10,781
Smoke Observations	71	54	47	25	197
Circular Letters sent	61	139	158	266	624
Shop Hours' Act, Voting Papers delivered & col'd	22	56	27	50	155
Milk Regulations, Circulars delivered ...	93	46	35	71	245
Notices served for Defective Slopstone Pipes	123	23	87	48	281
" " Drains	90	190	141	138	559
" " Spouts	36	49	44	71	200
" " Water Closets	146	85	102	104	437
" " Privies and Ashpits	1	3	...	1	5
" " Yard Pavement	63	32	1	14	110
" " Lobby ..	8	...	...	74	82
" Overcrowding	9	2	3	2	16
" Limewashing ...	46	50	63	59	218
" Manure Accumulations	3	6	9	7	25
" Stagnant Water .....	...	...	3	3	6
" General Nuisances ...	117	85	60	168	430
Notices served to Sewer, Level, Pave, &c. ...	36	...	167	...	203
" Flag Yards	170	257	316	313	1,056
" Convert Privies into W C's.	252	46	16	35	349
" Fill up Ashpits	9	11	...	4	24
" Supply Ashpail...	23	29	3	33	88
" Close Houses unfit, &c. ....	...	12	...	...	12
" " Cowsheds	1	...	...	...	1
" Fill up underground Bakehouse	...	...	...	1	1
House Drains Tested	83	141	11	59	294
School Drains Tested .....	...	...	...	1	1
Number of Houses Disinfected	136	186	138	148	608
Number of Schools ..	...	11	15	9	35
Parcels of Bedding ..	40	109	34	72	255
Number of Animals removed	72	93	31	41	237
" Ashpails cleansed .....	...	...	...	...	1,630,912
" Ashpits cleansed .....	...	...	...	...	2,635
Fish Condemned and Destroyed .....	...	...	{ Shell Wet Dry	3642 lbs. 31711 " 2365 "	{ 37,718 }
Butcher's Offal Condemned and Destroyed.....	...	...	...	112 "	112

TABLE No. 6A.

Factories, Workshops, Laundries, Workplaces and Home-Work.**1.—INSPECTION.**

Premises.	Number of		
	Inspections	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	288	...	...
Workshops (including Workshop Laundries)	2406	...	...
Workplaces (Other than Outworkers' premises included in Part 3 of this Report)	107	...	...
Total	2801	...	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts :—</i>				
Want of Cleanliness	21	21		
Want of Ventilation	3	3		
Overcrowding ... ..	...	...
Want of drainage of floors	8	8		
Other Nuisances	25	23		
Sanitary accommodation } insufficient	26	25		
	48	46		
		
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (s. 101.) ... ..	...	...
Breach of special Sanitary requirements for bakehouses (s.s. 97 to 100) ... ..	...	...
Other offences (Excluding offences relating to outwork which are included in Part 3 of this Report)... ..	...	...
Total	131	126	...	...

3.—HOMEWORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.								Number of Inspections of Outworkers premises.	OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.				Number of Addresses of Outworkers received from other Councils.	Number of Addresses of Outworkers forwarded to other Councils.	Prosecutions.			Instances	Notices served.	Prosecutions.	Instances.	Orders made (sec. 110).	Prosecutions (Sections 109, 110).
	Twice in the Year.		Once in the Year.				Failing to keep or permit inspection of lists.	Failing to send lists.							
	Lists.	Outworkers.	Lists.	Outworkers											
Wearing Apparel :—															
(1) making, &c. ...	79	158	...	...	1	1	...	...	96	...	...	...	...	...	...
(2) cleaning and washing ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL ...	79	158	...	...	1	1	...	...	...	...	...	...	...	...	...

4.—REGISTERED WORKSHOPS.

5.—OTHER MATTERS.

Workshops on the Register (s. 131) at the end of the year.							Number.	Class.	Number.
Factories ... ..	...	...	...	...	...	...	116	Matters notified to H.M. Inspector of Factories :—	
Workshops ... ..	...	...	...	...	...	...	692	Failure to affix Abstract of the Factory and Workshop Act (s 133) ...	...
Retail Bakehouses ... ..	...	...	...	...	...	...	109	Action taken in matters referred to H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act, (s. 5.)	13
Public do. ... ..	...	...	...	...	...	...	20	Other... ..	13
Workplaces ... ..	...	...	...	...	...	...	84	Underground Bakehouse (s. 101) :—	
Total number of workshops on Register ...							1021	Certificates granted during the year ... ..	...
								In use at the end of the year	3

TABLE No. 10.

Summary of Work done under the Factory and Workshops Act during the Year 1907.

	No. 1 District	No. 2 District.	No. 3 District.	No. 4 District.	Total
Number of Factories and Workshops on Register	175	338	145	338	996
„ Circular Letters sent re Out-workers ...	5	46	5	59	115
„ Out-workers reported	6	82	4	33	125
Visits to Factories and Workshops	457	568	368	536	1929
„ Retail Bakehouses	162	278	79	118	637
„ Public Bakehouses	110	27	40	58	235
„ Home-workers premises	7	26	22	41	96
Drains tested ..... ..	...	...	...	...	...
<i>Defects found and Remedied:—</i>					
Defective Urinals ..... ..	...	1	...	...	1
„ Drains ..... ..	...	5	...	3	8
„ Spouts and Roofs ..... ..	...	3	...	1	4
„ Water Closets	17	7	20	4	48
Privies converted into W.C.'s ..... ..	...	...	...	1	1
Limewashing required	4	2	12	3	21
General Nuisances	1	3	6	7	17
Insufficient Ventilation	3	...	...	...	3
„ W.C. accommodation for Females	1	...	16	2	19
„ „ Males	1	...	5	...	6
No Receptacle for Refuse	1	..	...	...	1
Manure Accumulations	1	...	...	1	2

TABLE No. 11.

List of Factories and Workshops on Register during the Year 1907.

	No. 1 District	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Bakers and Confectioners (Retail)	24	33	18	34	109
Bakers (Public)	5	5	4	6	20
Basket Makers	1	2	2	1	6
Beer Bottlers	4	2	...	4	10
Biscuit Makers .....	...	4	1	...	5
Boot, Shoe, and Clog Makers, Leather Curriers	21	48	22	31	122
Brassfounders	1	2	2	...	5
Breweries	1	4	...	3	8
Brush Makers	1	1	...	2	4
Cabinet Makers, Wood Carvers, Upholsterers	4	7	3	14	38
Coach Builders	1	5	1	4	11
Cotton Waste Cleaners .. ..	...	1	...	...	1
Cotton Manufacturers	23	14	20	8	65
Coopers	1	3	1	...	5
Cycle Makers and Enamellers	3	11	3	7	24
Engravers .....	...	...	...	6	6
French Polishers	1	2	..	2	5
Ironfounders.....	4	5	5	3	17
Joiners, Builders, Wheelwrights, Wood Turners ...	12	14	5	11	42
Laundries	2	...	3	1	6
Marine Store Dealers .....	...	4	...	2	6
Milliners, Dressmakers, Underclothing Manufacturers	24	65	20	49	158
Picture Framers, Mount Cutters, Gilders	1	4	2	6	13
Photographers	2	3	2	2	9
Plumbers, Painters	10	13	4	17	44
Printers, Bookbinders .....	...	1	...	18	19
Restaurant Keepers	4	3	3	3	13
Rope and Twine Makers	2	...	2	...	4
Saddlers	1	6	1	4	12
Smiths, Black and White and Tinplate	5	6	5	24	40
Stone and Marble Masons	4	4	2	3	13
Sugar Boilers	3	1	...	...	4
Tailors	8	31	8	44	91
Watch Makers and Jewellers	3	11	3	10	27
Wire Workers... ..	...	1	...	1	2
Offensive Trades {	Fell Mongers .....	...	...	1	1
	Soap Boilers .....	...	1	3	4
	Fat and Tallow Melters	4	...	3	7
	Tripe Boilers	1	...	1	4
	Knacker Yards	1	...	...	1
	Gut Scrapers.....	...	4	...	4
Various.....	2	12	3	19	36

TABLE No. 12.

HEALTH VISITORS.

Summary of Work done during the Year ending 31st December, 1907.

				Districts.		Total.
				A.	B.	
Visits, Births.	{	Number of Houses visited		1724	1164	2888
		" " Found Clean		1565	1109	2674
		" " " Dirty		159	55	214
		Children.	Breast Fed	1228	745	1973
			Partially Breast Fed	169	202	371
			Artificially Fed	327	217	544
		Occupation of Mother.	Home Permanently	1068	663	1731
			Home Temporarily	529	354	883
			Home and Work	29	60	89
			At Work when visited	98	87	185
Visits, Measles and Whooping Cough Deaths.	{	Number of Houses visited		53	15	68
		" " Found Clean		46	15	61
		" " " Dirty		7	...	7
Visits, Diarrhœa Deaths.	{	Number of Houses visited		15	19	34
		" " Found Clean		10	18	28
		" " " Dirty		5	1	6
		Children.	Breast Fed	2	1	3
			Partially Breast Fed	2	8	10
			Artificially Fed	11	10	21
Visits, House to House.	{	Number of Houses visited		244	6	250
		" " Found Clean		46	4	50
		" " " Dirty		198	2	200
Visits—Minor Infectious Diseases amongst School Children.....				1510	757	2267
Number of Re-visits				1301	767	2068
" Tube Bottles in use				116	109	225
" Cards Distributed				1724	1188	2912
" Visits to Midwives				28	...	...

TABLE No 13.

Return of Work done by Inspector of Food and Drugs, &c., during the year 1907.

Food and Drugs, Samples purchased	.....	.....	264
Cow-sheds and Dairies visited	.....	.....	202
Slaughter-houses visited	.....	.....	4254
Meat Condemned and Destroyed	.....	.....	93,163 lbs.
Meat Seized	Do.	.....	265 lbs.

TABLE No. 14.

Contagious Diseases (Animals) Act, 1878.

Name of Disease.	Situation of Premises.	Date of Outbreak.	Number of Diseased Animals.	Number of Healthy Animals.	Slaughtered by Owner.	Slaughtered by Order of Board of Agriculture.	Number of Visits.
Sheep Scab...	Ribbleton Lodge Farm ...	Jan. 27th.	17	...	...	6	20
Glanders ...	Red Lion, Church St.	Aug. 27th.	1	...	1	...	14
Anthrax ...	24, Elcho Street ...	Oct. 22nd.	1	17	1	...	9

TABLE No. 15.

Substances submitted for Analysis during the Year 1907.

Name of Article.	No. of Samples.	Result.
Baking Powder ...	1	Genuine
Bread	7	Do.
Butter	53	Do.
Camphorated Oil ...	4	Do.
Chocolate Caramels	1	Do.
Coffee	17	Do.
Compound Liquorice Powder	1	Do.
Cream of Tartar ...	4	Do.
Glycerine	2	Do.
Lard	5	Do.
Milk	53	Do.
„ (Skimmed) ...	2	Do.
Pepper (White) ...	7	Do.
„ (Cayenne)...	3	Do.
Rum	2	Do.
Seidlitz Powder ...	1	Do.
Sweets (Mixed) ...	7	Do.
Vinegar (Malt)	5	Do.
„	2	Do.
Wine (Port).....	1	Do.
Yeast	1	Do.
	179	Genuine
	23	Adulterated
	202	Total
Coffee	1	Contained 8 per cent. of chicory ; Vendor cautioned.
„	1	Contained 35 per cent. of chicory ; Vendor summoned, ordered to pay costs.
Milk	1	2·64 per cent. fat, 9·32 per cent. other solids, = 11·96 per cent. total solids.
Whiskey	18	Consisted almost entirely of patent still spirit.
„	1	27·8 degress under proof, which is 2·8 degrees below the statutory limit.
„	1	29·1 degrees under proof, which is 4·1 degrees below the statutory limit.

TABLE No. 16.

Substances informally purchased and submitted for Analysis during the Year 1907.

Name of Article.	No. of Samples.	Result.
Baking Powder ...	1	Genuine
Butter	27	Do.
Camphorated Oil ...	1	Do.
Cascara Sagrada ...	1	Do.
Cocoa... ..	1	Do.
Coffee	6	Do.
Flour (Austrian) ...	2	Do.
Lard	4	Do.
Marmalade	1	Do.
Milk	8	Do.
Pepper (White) ...	2	Do.
Seidlitz Powder ...	1	Do.
	55	Genuine
	7	Adulterated
	62	Total.
Coffee	1	Contained upwards of 45 per cent of chicory.
Milk	1	2·25 per cent. fat, 8·90 per cent other solids, = 11·15 per cent. total solids.
„	1	2·85 per cent. fat, 8·14 per cent. other solids, = 10·99 per cent. total solids ; 4 per cent added water.
„	1	Slightly watered—(non fatty solids 8·27 per cent.)
„	1	Slightly deficient in milk fat—(Fat 2·88 per cent.)
„ (Dried).....	1	2·25 per cent. fat, 8·88 per cent. other solids, = 11·13 per cent. total solids.
Olio	1	Contained approximately 5·4 per cent. of Maize Starch.

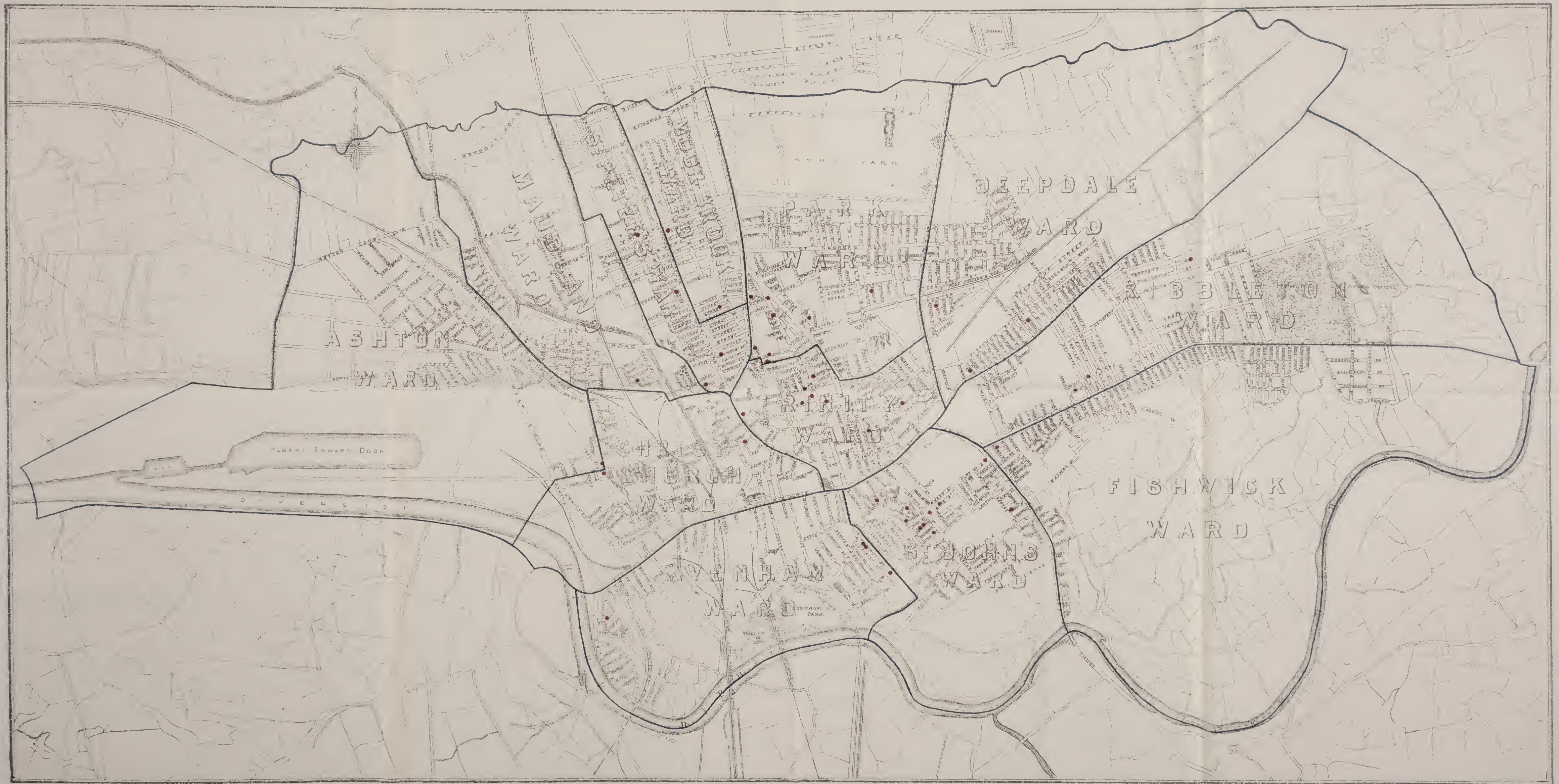
TABLE No. 17.

Return of Port Sanitary Work for the Year ending December 31st, 1907.

Steamships Inspected	.....	.....	.....	.....	1211
Sailing Vessels Inspected	.....	.....	.....	.....	87
Re-Inspections	.....	.....	.....	.....	136
Condition of Vessels Inspected	{	Good	.....	.....	1171
		Defective...	.....	.....	127
<i>Defects Remedied.</i>					
Forecastle Dirty ...	.....	.....	.....	.....	37
Do. Required Painting	.....	.....	.....	.....	23
Do. Deck Leaking	.....	.....	.....	.....	5
Do. Ventilation and Light Defective	.....	.....	.....	.....	10
Foul and Defective Water Closets	.....	.....	.....	.....	49
Foul Water Casks and Tanks	.....	.....	.....	.....	11
Dirty Provision Lockers	.....	.....	.....	.....	57
Do. Bilges	.....	.....	.....	.....	3
Do. Chain Lockers under Forecastle	.....	.....	.....	.....	2

INFANTILE DIARRHŒA, 1907.

The Red Spots indicate deaths from Diarrhœa under the age of one year.

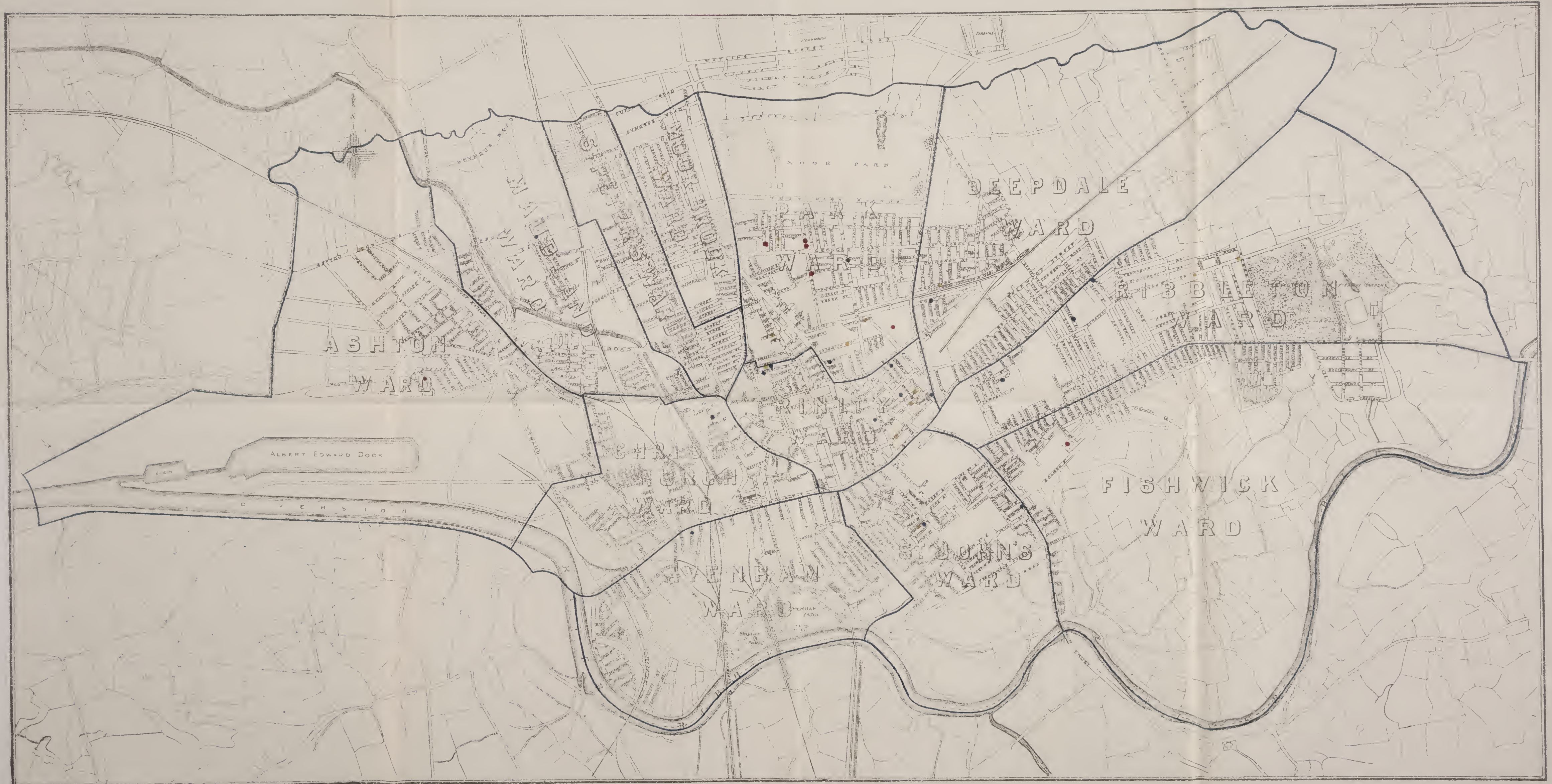


INFANTILE MORTALITY, 1907.



ZYMOTIC DISEASES, 1907.

The Red Spots ● indicate deaths from Scarlet Fever.
The Blue Spots ● " " Typhoid Fever.
The Yellow Spots ● " " Diphtheria.



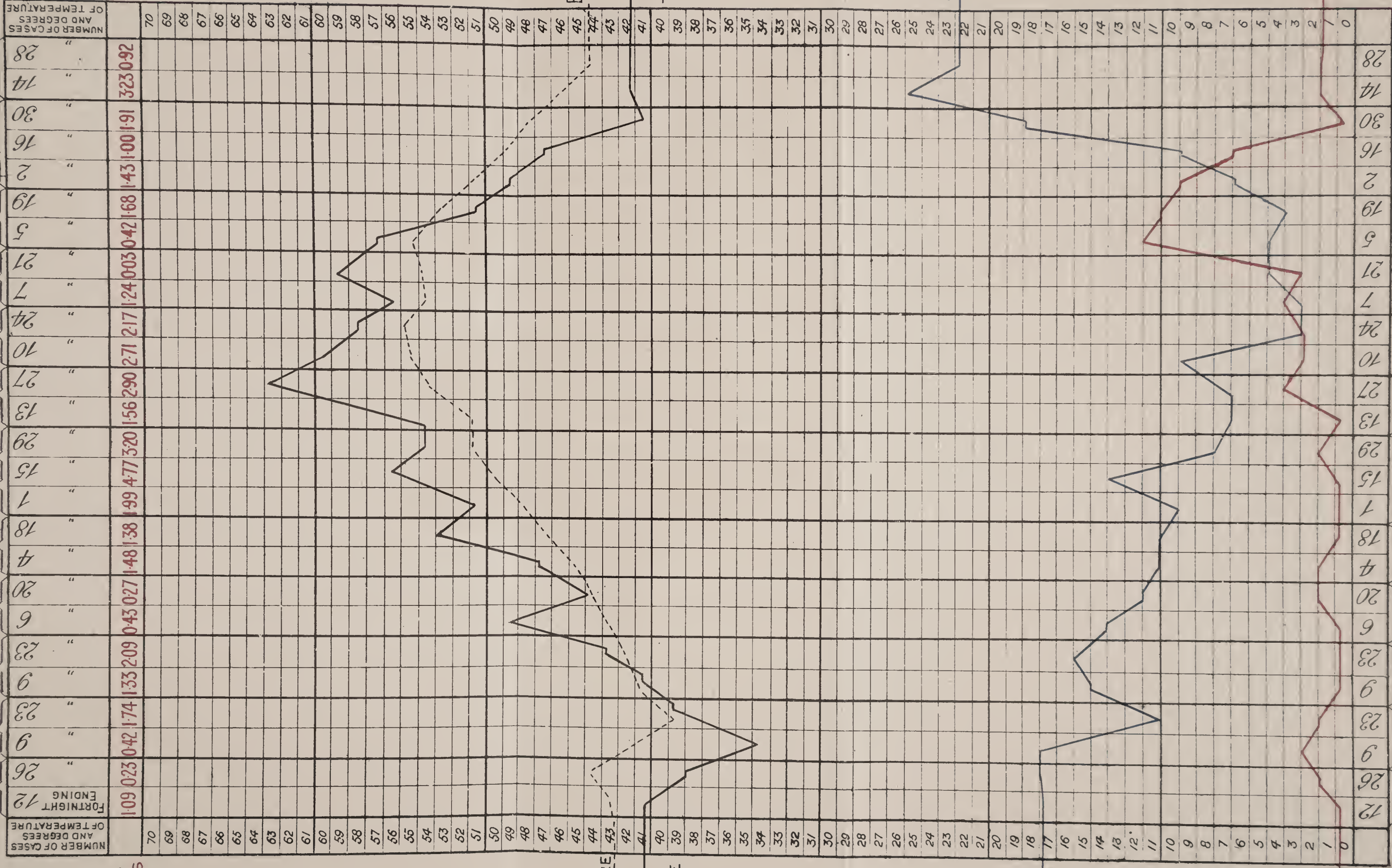


Portions coloured Red indicate Property reported upon and improved during the year 1907.

Those in lighter shade indicate Blocks dealt with during the previous twenty-three years.



JAN. FEB. MAR. APR. MAY. JUN. JUL. AUG. SEP. OCT. NOV. DEC.



JAN. FEB. MAR. APR. MAY. JUN. JUL. AUG. SEP. OCT. NOV. DEC.

